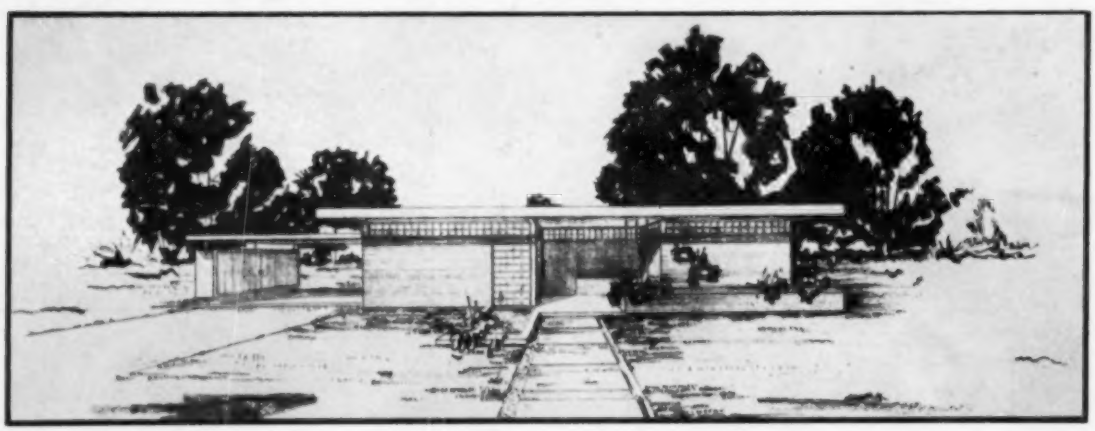
Brick & Clay Record

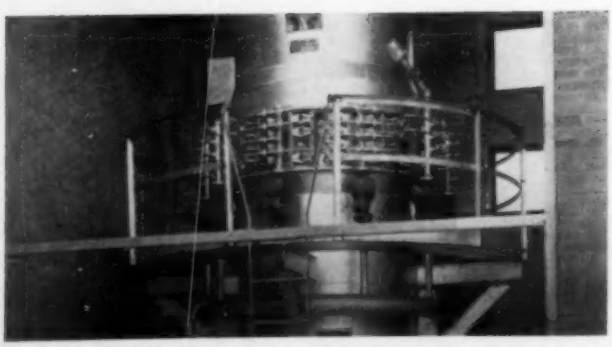
August 1957

Brick
Refractories
Structural Tile
Sewer Pipe
Drain Tile
Terra Cotta
Roofing Tile
Clay Aggregate

SCR SURVIVAL HOUSE . . .



New design protects against atomic bomb blast, tornado, earthquake, hurricane . . . at competitive cost, contemporary design, tested construction features. *See Page 44*



Lightweight Aggregate Furnace

Successful test run of furnace demonstrated to SCPRF members at meeting.

See Page 46

SCPRF REPORTS...

PANEL HOUSE TO BE BUILT
ATOMIC BOMB TEST RESULTS
EFFLORESCENCE RESEARCH
DETAILS OF OTHER REPORTS

TARGET.....FOR TODAY AND TOMORROW

Bonnot Machinery — custom-tailored to your raw material and product needs — incorporates nearly "70 years of built-in integrity of performance" that assures *less down time and reduces maintenance expense . . . .* that adds up to *lowest cost per ton of finished product.* Engineering features such as CONSOLIDATED GEARING, yet with separate clutch controls, for pug mills and augers . . . SUPER GEARING AND BEARINGS . . . BEST PUGGING . . . THOROUGH DEAIRING — *all save trouble and improve production.*

And from Bonnot, your inquiry gets the kind of attention so vital when *present and future* SIGHTS must be concentrated on "more and better brick, tile and pipe."

Rugged Machines for Constant Low Cost Operation — BONNOT'S the Buy

The BONNOT Co.
CANTON 2 OHIO

CRUSHERS
HAMMER MILLS
DRY PANS
WET PANS
GRINDERS
FEEDERS

CUTTERS
REPRESSES
DIES
MIXERS

AUGER MACHINES
VACUUM MACHINES
SPECIAL EXTRUDERS
PUG MILLS

SPECIAL MACHINES TO ORDER
DIRECT FOUNDRY SERVICE

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LETTERS To the Editor

Bound Copies

Editor, BRICK & CLAY RECORD—We would like to have our past copies of the BRICK & CLAY RECORD bound and indexed for our library. Could you supply us with any information on where we could have this done?

D. J. Stefl
Ass't General Superintendent
Freeport Brick Co.
Freeport, Pa.

Ed. Note: Information has been sent. If any other readers are interested in doing this, we'd suggest they check with some book binderies or large printers in nearby larger cities, or write to us.

June Editorial

Editor, BRICK & CLAY RECORD—In the June edition of BRICK & CLAY RECORD there was an editorial re glazed brick.

We would appreciate receiving approximately 200 reprints of this particular page.

Mrs. E. Eaton
Cooksville Co., Ltd.
Toronto, Ont., Canada

Editor, BRICK & CLAY RECORD—We have received our June issue of your magazine and found it very interesting as usual.

We would like to have about 100 reprints of your editorial. If it is convenient, some reprints of the "Hold the Price Line" editorial originally published in November, 1956, and February, 1957, would be timely . . .

L. H. Bannan
LaPrairie Brick & Tile, Inc.
Montreal, Que., Canada

Oldest Plant

Editor, BRICK & CLAY RECORD—I notice that since he has gone down South Red Bruno is looking for the oldest brick plant. Plant at New Oxford, Pa., has been making brick for a long time and they started in the 1840's as I recall it—about the same time that the Merry family began to make brick at Augusta, Ga.

If Red were to include refractory plants, two different companies in Johnstown, Pa., have been making fire brick for over a hundred years.

J. G. Seanor
Bonnot Co.
Canton, O.

Ed. Note: In the June issue, L. V. Bruno of Guignard Brick Works wanted to know who was the oldest continuous manufacturer of brick in this country. Above is one of the responses to this query. We can't officially answer the question yet and hope more of our readers will give us their opinions and guesses.

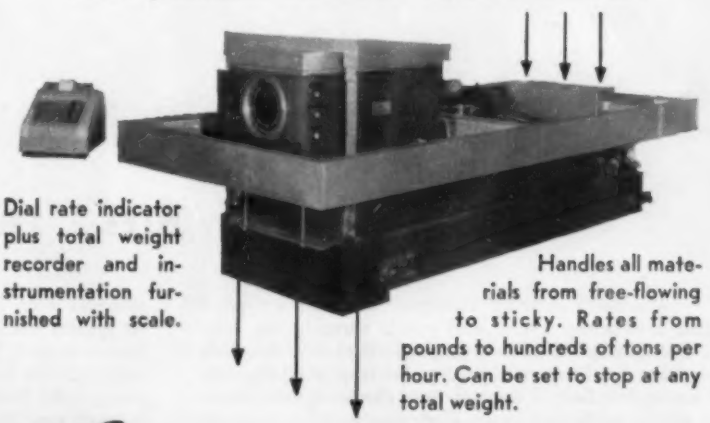
Contents List

Editor, BRICK & CLAY RECORD—Perhaps I have been so used to not seeing a table of contents in your magazine that I have been overlooking them. At any rate, I noticed the one on page 9 of the May issue and offer my congratulations for a real step in the right direction.

Your magazine has many good features but I must admit that in the past I have tended to delay reading it . . . simply because I could never find my favorite departments first. Here's to a bigger and better table of contents, preferably on the first page.

L. R. Burnett
Manager, Market Research
Kaiser Chemicals Div.
Kaiser Aluminum & Chem. Co.
Oakland, Calif.

NEW Thayer BELT FEEDER
CONTINUOUS WEIGHING
Only Thayer Scales have the Thayer Plate Leverage System that is guaranteed accurate for the life of the scale.



Dial rate indicator plus total weight recorder and instrumentation furnished with scale.

Handles all materials from free-flowing to sticky. Rates from pounds to hundreds of tons per hour. Can be set to stop at any total weight.

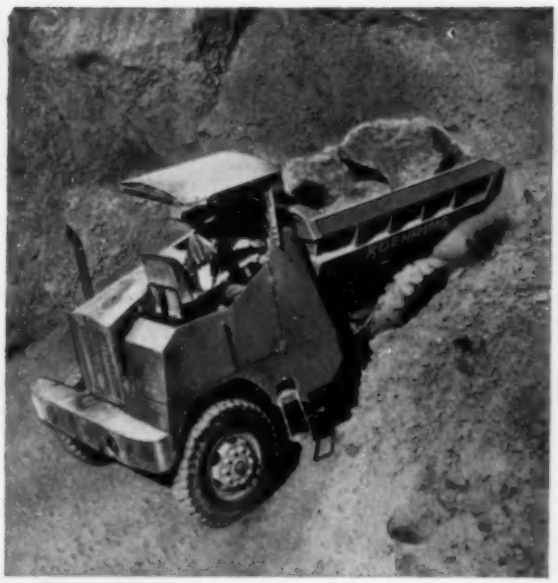
THE Thayer SCALE
BATCHING • FILLING • CHECKING — AUTOMATICALLY BY WEIGHT
AUTOWEIGHTION
THAYER SCALE CORP., 12 THAYER PARK, PEMBROKE, MASS.

"Brick & Clay Record is published monthly by Industrial Publications, Inc., 5 S. Wabash, Chicago 3, Ill. Subscription price: U. S. A. and Canada, $5.00 per year; three years, $10.00; Foreign subscription price: $7.00 per year; three years, $15.00. Vol. 131, No. 2. Entered as Second Class Matter January 2, 1911, at the Post Office at Chicago, Ill., under the Act of March 3, 1879. Additional entry at Pontiac, Ill."

MINING WITH DUMPTORS

...in open pits...*and underground*

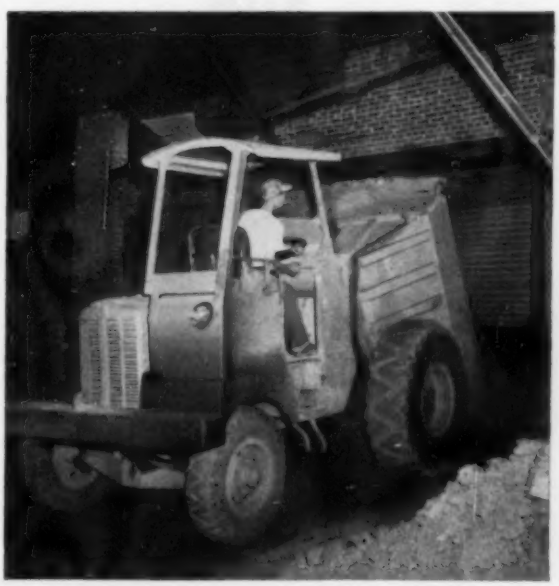
Follow Koehring Dumptor through a typical load-haul-dump cycle, and you'll quickly see why it has gained such wide acceptance on all kinds of mine hauling, stockpiling, feeding hoppers, etc. First, notice how it saves time at the loader (above). Wide-flared 6-yard body, with low height, provides a big square target — *64 square feet, to be exact* — for loading over either side or end by shovel, dragline or front-end loader. On the haul, Dumptor travels at the same speeds in either direction. *There's no need to turn* — an important advantage when working along narrow ledges, overhead trestles, tunnels, etc. It accelerates fast, climbs 24% ramps or grades with capacity load. That's because there's better than 6 H.P. of *"go"* for every ton of loaded weight. At the dump area, *gravity* tilts the body, dumps the load *in one second*. There's no 15 to 25-second wait for slow-acting mechanical body-hoist — and no expensive hoist maintenance, because *gravity-dump* never balks, never wears out. You get all these advantages *and more* when you haul with heavy-duty Dumptors. See your local Koehring distributor about a demonstration, or write to us for the latest Dumptor® catalog.



Up-grade all the way — Near Mexico, D.F., 3 Dumptors haul rock and sand 600 feet up-hill from mine to hopper. In spite of steep, winding road, and normal loading delays, each Dumptor averages 150 loads per 12-hour day. These heavy-duty, 6-yard haulers, with their high ratio of H.P.-to-weight, can climb mine grades as steep as 24% fully loaded.

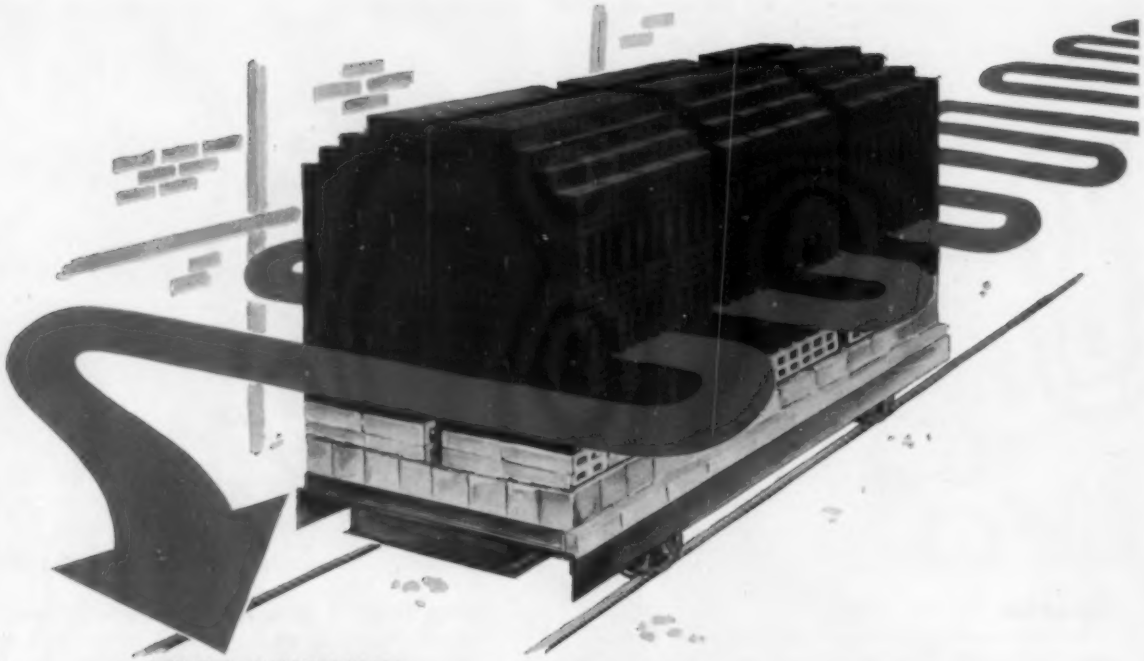
Dump time: 1 second — At hillside hopper, Dumptor drives up, body forward. Operator trips a body-release lever, and *gravity* tilts the body — dumps the load instantly. Free-swinging kick-out pan breaks load suction for fast, clean dump when hauling wet, sticky materials — bolts down to floor of dump body when handling heavy boulders like this.

Shuttles underground — There's no room to turn in this mine tunnel, and no need to turn. Koehring Dumptor drives up, gets its load, then shuttles back out of tunnel at the same speed as it entered. It operates with equal ease and speed in either direction — is as efficient underground as it is on inclined ramps, overhead trestles, or hauling on the surface.



An inside job — To save rehandling of materials, 2 Dumptors haul clay from pit to processing plant, dump directly into hoppers inside the plant. Convenient end-dump, and no-turn shuttle hauling are especially practical on operations like this, eliminate turning and spotting in crowded work-areas. Handy, too, for stockpiling, and loading rail cars.

KOEHRING DIVISION OF KOEHRING COMPANY • Milwaukee 16, Wis.



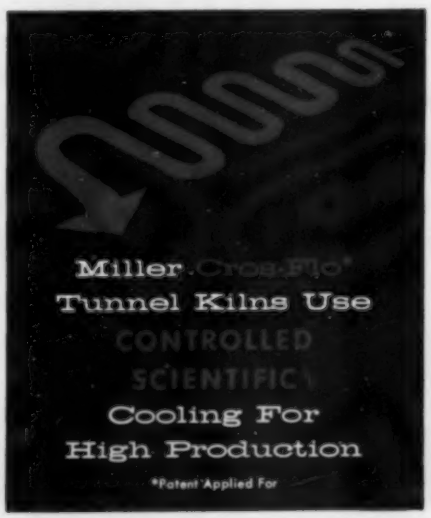
THE MILLER CROS-FLO KILN *Outperforms Them All!*

Miller's proven successful Cros-Flo principle solves the age-old problem of uniform, select brick production. Air and gases are forced in a zig-zag fashion through the kiln — *evenly* penetrating each stack.

Owners report excellent production results, economical operation, first quality ware . . . day after day.

You'll find that the Miller Cros-Flo produces uniformly dried, fired and cooled ware at an exceptionally high-production rate. Call, write or wire Miller today.

- **CROS-FLO KILNS**
- **CONVEYOR EQUIPMENT**
- **HAMMERMILL CRUSHERS**
- **ENGINEERING SERVICE**



Miller Equipment Company

P. O. Box 1566 • Telephone 6300 • Salisbury, N. C.

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WALTER C. STOLL & SONS
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Los Angeles 32, California

Southwestern Agent:
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TO: **DODGE REPORTS**, DEPT. 46, 119 WEST 40th STREET, NEW YORK 18, N. Y.

Yes! I'd like to see how to get more business by knowing in advance who's going to build, what, when, where.

I want to know whom to contact and when to submit bids.

I'd like to see some Dodge Reports, and I'd like a copy of your booklet that tells how to use this accurate, daily, up-to-the-minute construction news service.

I understand that I can pick just the area in the 37 Eastern States and the type of construction activity that interests me. Also, that I won't have to wade through mounds of data to find the information I need.

I'm interested in General Building ☐ **House Construction** ☐ **Engineering (Heavy Construction)** ☐

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Dodge Reports
For Timed Selling to the Construction Industry

The Low-Down on Low-Bowl Scrapers

A wide, low bowl is important in a scraper, but it takes more than just low-bowl design to give you performance with the best profit factor.

That's why Allis-Chalmers combines this with other equally important features to give you the most efficient scrapers available.

CHECK THIS PROFIT-BUILDING COMBINATION:

1.

Low, wide-bowl design for fast, heaped loading.

2.

Curved bowl bottom and offset cutting edge for faster, easier penetration and live, boiling loads that fill every corner of bowl.

3.

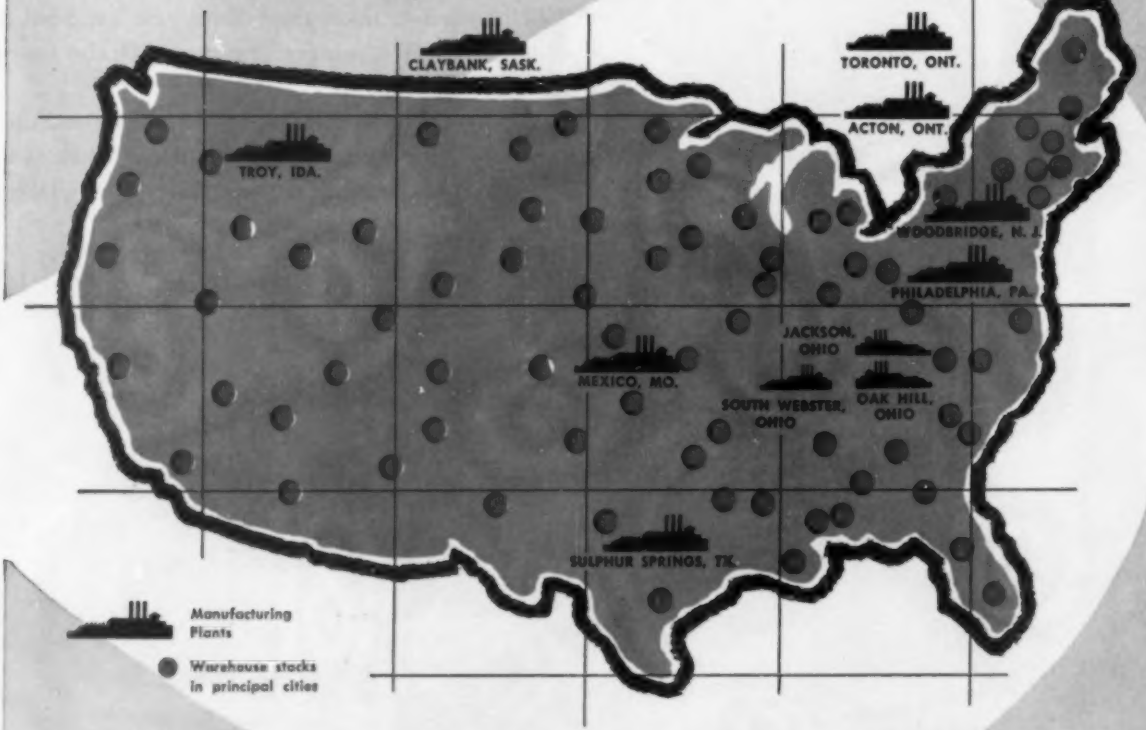
Patented apron-ejector linkage combines high apron lift with positive, forward forced ejection—permits either quick, complete dump or smooth, even spreading.

Your Allis-Chalmers dealer will be glad to discuss these and many other profitable advantages with you. Allis-Chalmers, Construction Machinery Division, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS *Engineering In Action*

A. P. Green
REFRACTORY PRODUCTS

manufacturing and warehouse facilities strategically located to save you time and costs



11 A. P. Green manufacturing plants and warehouse stocks conveniently located throughout the United States and Canada, Save You Money 7 Ways.

- **Lower Shipping Costs . . . from nearby manufacturing or warehouse point.**
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- **Lower Inventory Costs . . . you need inventory only for *immediate* needs.**
- **Lower Inventory Losses . . . buy on current prices . . . less breakage while in storage.**
- **Increase Production Space . . . free storage space for profitable production.**
- **Lower Labor Costs . . . deliveries to point of usage . . . no inplant moving of stocks.**
- **Maintain Steady Production . . . reduce down time waiting for materials.**

Your A. P. Green Distributor is Listed In The Yellow Pages of Your Telephone Directory, or write:

A. P. GREEN FIRE BRICK COMPANY
Mexico, Missouri, U. S. A.

PLANTS:
Mexico, Mo. — Woodbridge, N. J. — Sulphur Springs, Texas — Jackson, Oak Hill, South Webster, Ohio — Philadelphia, Pa. — Troy, Idaho.

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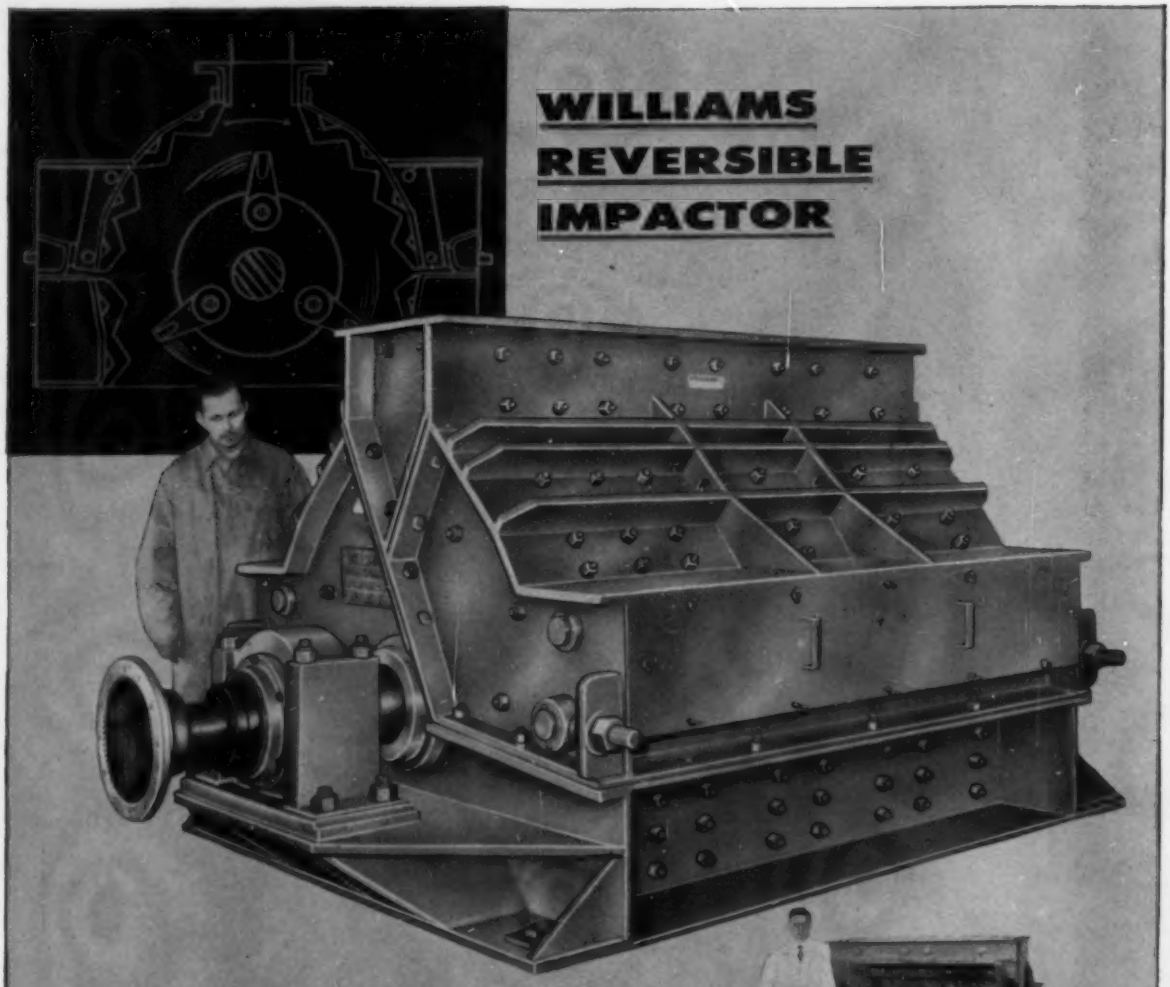
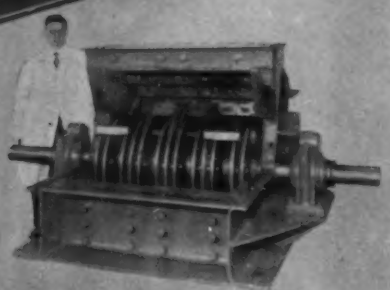
Distributors In The Principal Cities of The World

WILLIAMS REVERSIBLE IMPACTOR



- 100% Impact Reduction
- No Friction Or Abrasion
- Unobstructed Discharge
- Less Upkeep Expense

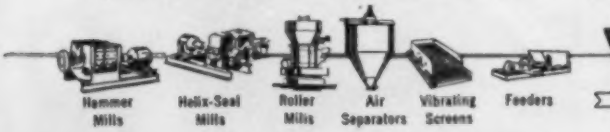


Internal view showing manganese steel impact blocks, hammers and liners. Rugged, heavy steel plate construction. Extra large shafts are mounted in oversize bearings sealed in self-aligning housings.

Lower Cost Crushing And Grinding

Will reduce clay and shale direct from the bank to 8, 10 mesh, or finer, for burned ware. Reduces its own screen tailings. 100% impact action permits reduction of abrasive materials with lower upkeep expense. Material falls *between* the hammers which throw it against the impact blocks, setting up a repeated ricochet action and the reduction is entirely by impact with no wearing, abrasive, grinding action thereby lessening wear on parts. Hammers can be rotated in either direction, rotated to the right today, to the left tomorrow thereby giving double hammer life. Impact blocks adjustable for wear and fineness of product. Finished material is discharged freely which further lessens upkeep expense. A size for every job. Describe your work and let us tell you about one for your use.

WILLIAMS PATENT CRUSHER & PULVERIZER CO.
2709 North Broadway **St. Louis 6, Mo.**



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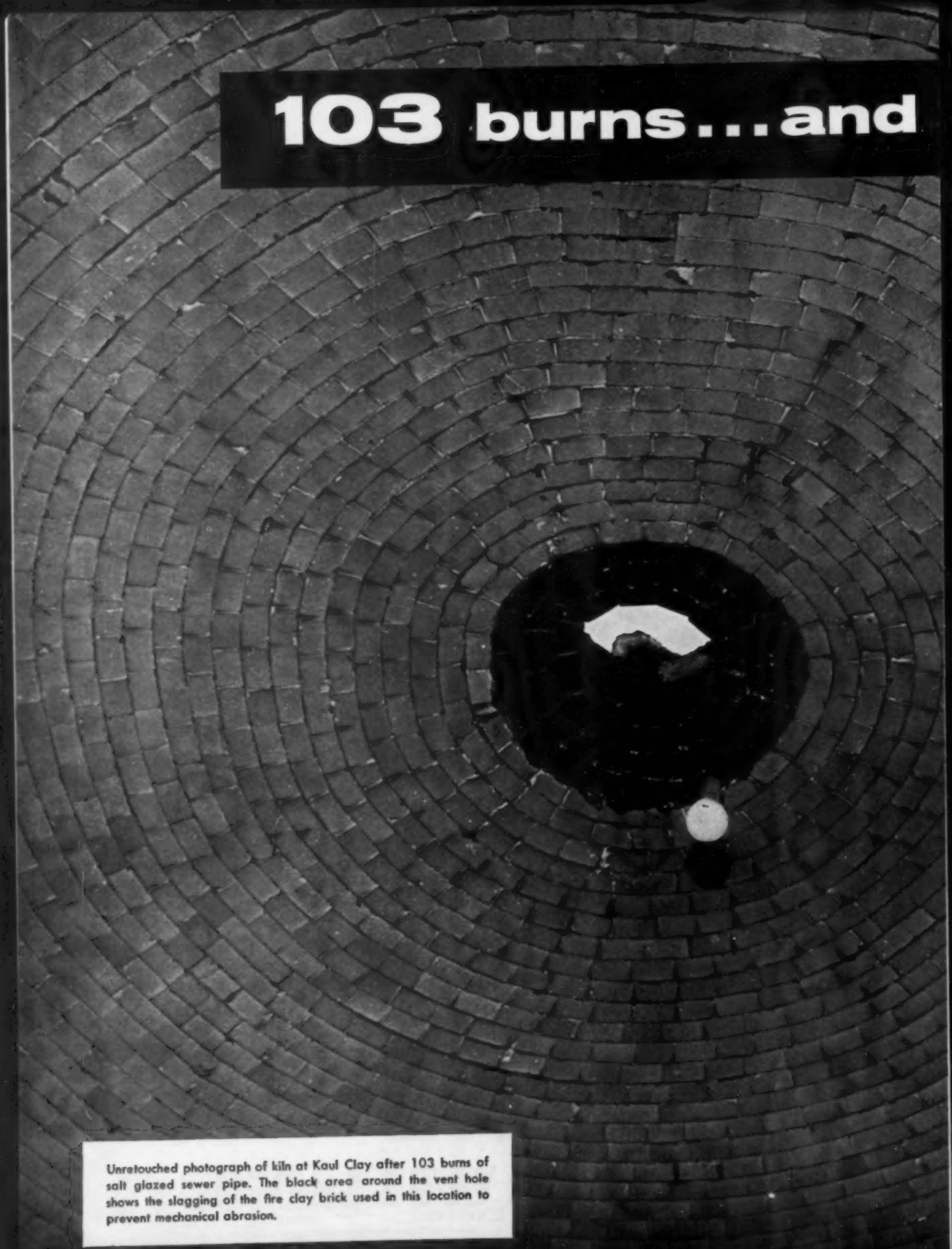
CRUSHERS · GRINDERS · SHREDDERS
Oldest and Largest Manufacturers of Hammer Mills in the World

103 burns...and



Unretouched photograph of kiln at Kaul Clay after 103 burns of salt glazed sewer pipe. The black area around the vent hole shows the slagging of the fire clay brick used in this location to prevent mechanical abrasion.

no salt glaze reaction

B & W Insulating Firebrick increase production 11%, cut cycle time 28% at Kaul Clay Manufacturing Co.

This photograph of #17 kiln crown at the Kaul Clay Manufacturing Company, Toronto, Ohio, is clear evidence of the performance of B&W Insulating Firebrick in salt glaze periodic kiln service.

Kaul Clay's production figures prove it, too. Over a recent six months' period, plant records indicate an *11% increase* in output. They obtained 2.74 burns per month from kilns lined with B&W Insulating Firebrick as against 2.47 burns per month from kilns constructed of firebrick. Cycle time on 4" glazed pipe—setting, burning and drawing—has been reduced from 7 to 5 days. Fuel costs have also been cut substantially. During this time, approximately 40% of Kaul Clay's kilns were converted to IFB construction.

This profitable performance is due to *two* properties of *lightweight* B&W IFB: (1) They store and conduct less heat. Their low heat storage permits quicker heating and cooling of furnaces, thus helping step up production and cut cycle time. It means, too, that less fuel is required to bring them up to temperature. (2) B&W IFB have excellent resistance to the atmosphere of salt glazing kilns. That's because the chemical properties of B&W IFB enable them to withstand alkali attack.

Why don't you begin profiting from the advantages of lightweight B&W Insulating Firebrick in periodic kiln service? Consult your local B&W refractories engineer on your specific application. He may be able to point the way to new savings for you.

Bulletin R-43 gives helpful data on the use of B & W Insulating Firebrick in periodic kilns. Send for your copy today.

BABCOCK & WILCOX

THE BABCOCK & WILCOX CO.
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R-875

Materials Equipment Services

MOTORS—One to 600 H.P., A.C. Fast delivery of all popular models from the company's warehouses is claimed by Brook Motor Corp., who have been in the motor business for over 50 years. Brook Motor Corp., 3552 W. Peterson Ave., Chicago 45, Ill.
544/Circle on Reader's Service Coupon

CONSTRUCTION NEWS — Advance information about new projects helps you know what's being built, who to contact, when the job is out for bids, and who's bidding. Pick the type of job you want. Dodge Reports, Dept. 45, 119 W. 40th St., N.Y.C. 18.
545/Circle on Reader's Service Coupon

BRICK FORKS — Priester forks are handling brick in units of all sizes, emphasizing automatic operation. For cored and solid brick, forks come with flap grippers. Bradney Machine Co. Inc., Middletown, N.Y.
546/Circle on Reader's Service Coupon

KILN CAR WHEELS — Henderson Clay Products of Henderson, Tex., reports praise for Sanford-Day wheels and bearings. S-D's "Floater" wheel is claimed to remain in perfect alignment, needing no adjustment once bearing nut is tight. Enclosed outer hubs and protected inner hups reportedly eliminate dust, retain lubricant. Sanford-Day, Knoxville, Tenn.
547/Circle on Reader's Service Coupon

PALLET CLEANERS — Besser says their pallet cleaners do not warp or nick pallets. Machine compensates automatically for differences in pallet thickness, gets down to bare steel. Cleans up to 300 pallets per hour. Bulletin 101. Besser Company, Alpena, Michigan.
548/Circle on Reader's Service Coupon

COLORS—Glaze stains in brilliant shades and pastels in a wide color range and stable at high temperature are offered by Drakenfeld. Strong, uniform body or engobe stains for colored bodies for slip application also come in many shades. B. F. Drakenfeld & Co., 45 Park Pl., N.Y.C. 7.
549/Circle on Reader's Service Coupon

TRACTOR-DOZER — Allis-Chalmers new HD-6 claims 65 belt HP, up to 15,500 lb. drawbar pull, forward speeds from 1.5 to 5.5 MPH and reverse speeds up to 4.1 MPH. Also has engine-mounted rams, only two linkage points. Allis-Chalmers Construction Machinery Div., Milwaukee 1, Wisc.
550/Circle on Reader's Service Coupon

CUTTERS—Platens for brick or tile are built at any level for optimum wire cutting angles. All are quick-change units that do not disturb the alignment of reel and gear assembly. Maximum brick: 27 per cut. Maximum tile: 5 12" pieces. Chambers Bros. Co., 52nd & Media Sts., Philadelphia 31, Pa.
551/Circle on Reader's Service Coupon

BRICK PRESS—In order to better orient the mix for the final compression stroke, Boyd presses now have an automatic "De-Airing Pause" in the machine's operation. This is claimed to allow trapped air to escape from the partially compressed material. Over 95% of American refractory production is said to be turned out on Boyd presses. Chisholm, Boyd, & White Co., 610 W. 57th St., Chicago 21, Ill.
552/Circle on Reader's Service Coupon

CONCRETE BLOCK—Because control is so important in selection of block aggregates to maintain uniform quality, Besser Co. makes available to Vibrapac users a special Materials and Methods Research & Testing department. Field engineers will come to your plant, gratis. Dept. M-M, Besser Co., Alpena, Mich.
553/Circle on Reader's Service Coupon

HYDRAULIC TRANSFER CARS—Claimed to be only car on market with truly variable speed. Hydraulic drive allows use of such auxiliary equipment as pusher cylinder on car to pull on and push off kiln cars, and even change dryers. Engineering Associates Inc., P.O. Box 5284, Asheville, N.C.
554/Circle on Reader's Service Coupon

EXCAVATORS — You can cut costs in stripping and loading through more output, steady operation with little maintenance trouble, and ample strength with Bucyrus-Erie's 38-B. Bucyrus-Erie Co., So. Milwaukee, Wisc.
555/Circle on Reader's Service Coupon

COAL—Baltimore & Ohio Railroad coal traffic representatives can help you discover the most efficient low-cost bituminous coal for your particular requirements. Coal Traffic Dept., B&O Railroad, Baltimore 1, Md.
556/Circle on Reader's Service Coupon

HARDFACING—Dixie Fire Brick Co., of Kimberly, Ala., recently set up the following hardfacing program with help from Stoody Co.: 60" muller tires, 3" thick with a 12" face—finished with a pass of Stoody 21; augers, shredders, sealing dies, spacing rings, and paddles of the extruding machine—with other Stoody alloys. Stoody Co., 11937 E. Slauson Ave., Whittier, Calif.
557/Circle on Reader's Service Coupon

HAMMERMILLS—If you have a crushing problem, American's engineering department will be happy to analyze your reduction trouble, make test runs if necessary, and offer specific recommendations — at no obligation to you. American Pulverizer Co., 1061 Macklind Ave., St. Louis 10, Mo.
558/Circle on Reader's Service Coupon

LOADERS — International's Drott claims to apply hydraulic force to full piston face instead of just the rod-end area, have greater leverage, and ground-based fixed fulcrum. Company says this adds up to heavy duty loader design that "separates the men from the boys." International Harvester Co., Drott Mfg. Corp., Milwaukee 15, Wisc.
559/Circle on Reader's Service Coupon

V-BELTS—Gates claims you can cut sheave width and weight by using their Super Vulco Drives. Company says 5 of their ropes will do the work of 7 standard V-belts; that inner resilient cords give 40% more HP capacity. Gates Rubber Co., Denver, Colo.
560/Circle on Reader's Service Coupon

MAXIMULLER — has revolving pan with screen plates in the pan bottom, with large mullers, widely spaced for greater crushing effect. Bulletin B-53. Clearfield Machine Co., Clearfield, Pa.
561/Circle on Reader's Service Coupon

Please say "I saw It in B&CR"

EXTRUDERS—Bonnot Co. reports a Special Combination Extruder installed in 1912 at Metropolitan brick of Canton has produced over one billion brick in its 45 yearsr of operation—enough for 101,250 homes. Bonnot Co., Canton 2, Ohio.
562/Circle on Reader's Service Coupon

RIGID FRAMES—in clear spans of 32', 36', 40', 50', 60', 70' and multiples thereof, as well as pipe structures that are flexible and adaptable to your individual needs are all available. R. G. Varner Steel Products Inc., Pine Bluffs, Ark.
563/Circle on Reader's Service Coupon

SUPERLITE UNLOADERS—Claim low first cost, low operating cost, and fast, gentle handling. Builders Equipment Co., 2810 N. Central Ave., Phoenix, Ariz.
564/Circle on Reader's Service Coupon

HEAT MEASUREMENT — Bell Fire-Chek Keys placed in various parts of the kiln shrink due to the heat, not the atmosphere of kiln, indicating the effect of the temperature on clay. Accurate measurement is possible with Bell's gauge. Bell Research Inc., E. Liverpool, Ohio.
565/Circle on Reader's Service Coupon

POWER CYLINDERS—Over 100 factory trained, experienced engineers are at your service to help you fill your air and hydraulic cylinder needs. Miller Fluid Power Div., Flick-Reedy Corp., 2013 N. Hawthorne Ave., Melrose Park, Ill.
566/Circle on Reader's Service Coupon

GLAZE STAINS—New 600 series chrome alumina pinks are said to have been improved for purer colors without "brown spots." Low initial cost and stability to Cone 12 are claimed. The 4000 series consists of zirconium-vanadium yellows, greens, and blues. Vitro Mfg. Co., 60 Greenway Dr., Pittsburgh 4, Pa.
567/Circle on Reader's Service Coupon

TRACTOR SHOVELS—The first Michigan Tractor Shovel Model 75A built is still in operation. The machine has put in 10,000 working hours, moving an average of 60,000 pounds per hour. Repair costs have been $700 for three years. Clark Equipment Co., 2455 Pipestone Rd., Benton Harbor 18, Mich.
568/Circle on Reader's Service Coupon

REAR DUMPS—At a German limestone quarry, two Model C Tournapulls are reported to haul about 180 tons of rock each working hour. Bowl design tends to deflect loading shocks, and load to 85-90% of capacity while box-shaped bodies stopped at 70%. LeTourneau-Westinghouse Co., Peoria, Ill.
569/Circle on Reader's Service Coupon

CAR TOPS—Paco claims 9 out of 10 users of their car tops are satisfied customers, and that all report replacement savings up to 50%. North State Pyrophyllite Co., Inc., Greensboro, N.C.
570/Circle on Reader's Service Coupon

HAMMERMILLS — Miller rotors throw particle against particle; material helps to pulverize itself. Double rotor hammermills have replaceable manganese steel hammers and tips. 50 and 100 ton capacities. Miller Equipment Co., P.O. Box 1566, Salisbury, N.C.
571/Circle on Reader's Service Coupon

How to Get Rush Information

If you want further information or literature describing the products in this special features, just use the handy card you will find on page 18. Our Reader's Service Dept. will contact the manufacturers directly and see that you obtain the requested information as quickly as possible.

CHEMICALS — Polyfon is claimed to increase dry strength 103%—0.4% Polyfon is said to increase dry modulus of rupture from 350 to 710 pounds per square inch, give greater uniformity, reduce lamination and keep product non-sticky. West Va. Pulp and Paper Co., Charleston A, S.C.
572/Circle on Reader's Service Coupon

FANS—New Type CR radial blade fan is streamlined — company claims this gives maximum static efficiency with reduced housing wear, because of minimized turbulence. Mechanical efficiency is reported to be over 78% for broad range. Buffalo Forge Co., Buffalo, N.Y.
573/Circle on Reader's Service Coupon

HARDFACING — Amsco's Super HF-20 Electrodes are claimed to have doubled service life of built-up hammers and mill housing because of high abrasion resistance, cost 40% less, and speeded up welding at Welding Flux Processing, Chicago Heights, Ill. American Manganese Steel Div., American Brake Shoe Co., Chicago Heights, Ill.
574/Circle on Reader's Service Coupon

PAYLOADER—One man on a model HA Payloader tractor-shovel, measures out 10,000 pound batches within 5-pound accuracy at Borg-Warner's Ingersoll-Humphryes Div. vitreous china plant. Four to five trips do the job, it's claimed. Frank G. Hough Co., Libertyville, Ill.
575/Circle on Reader's Service Coupon

GASKETING—Chem-O-Sol flowed in gaskets are claimed to flow quickly, eliminate dripping through proper gelling rate, fuse quickly and have good hot strength. Chem-O-Sol is a plastic formulation for the new plastic clay pipe joint. Chemical Products Corp., King Philip Rd., E. Providence, R.I.
576/Circle on Reader's Service Coupon

ENGINEERED AIR HANDLING—to correctly apply fan equipment is offered by Robinson. Get the right fan to do the right job—volume-wise, pressure-wise, construction-wise. Robinson Ventilating Co., Zelienople, Pa.
577/Circle on Reader's Service Coupon

BUILDINGS — Prefabricated pipe kiln buildings, storage buildings, and grinding buildings with steel, aluminum or asbestos covering according to your specifications are offered by Southern Fabricating Inc., Box 97, Staley, N.C.
578/Circle on Reader's Service Coupon

SCREENS—Modern and efficient electric heating equipment. Facts on Universal screens and Unilec heating are available in Catalog No. 150. Universal Vibrating Screen Co., Racine, Wisc.
579/Circle on Reader's Service Coupon

ROCKFACER—Claimed to pay for itself in 90 days, Rockfacer chips a straight edge on your brick, eliminating hammer-and-chisel methods. Machine is said to average 1250 brick per hour. Send a sample of your brick and have it Rockfaced. Rockfacer Co., 503 Hickory Tree Rd., P.O. Box 547, Mesquite, Tex.
580/Circle on Reader's Service Coupon

VIBRATORY FEEDERS—Control your feed rates, matching the efficiency of screens, driers, shredders, mullers and pug mills. Get smooth, even material flow. Electromagnetic principle confines all movement to leaf spring. Syntron Co., 620 Lexington Ave., Homer City, Pa.
581/Circle on Reader's Service Coupon

Why...

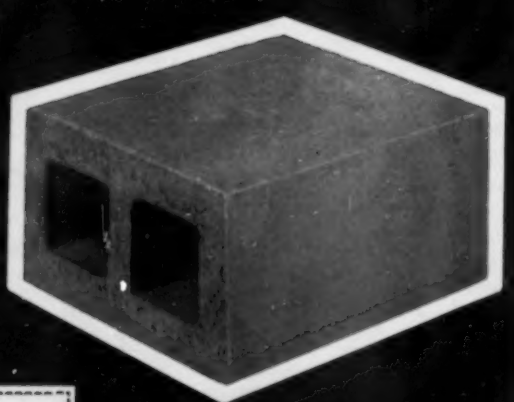
not let us tell you how

PACO CAR TOPS

cut replacement cost up to 50%?

Yes, we have the facts to prove that PACO Car Tops can reduce your replacement costs up to 50% . . . and we can also show you that nine out of ten users of PACO are completely satisfied customers!

You and your plant can also enjoy these increased savings on car tops. There is a PACO engineer as close as your telephone . . . or write us direct for complete information!



MAIL THIS COUPON TODAY!

NORTH STATE PYROPHYLLITE COMPANY, INC.
Greensboro, North Carolina

Please send me complete information about money-saving PACO CAR TOPS!

NAME_____

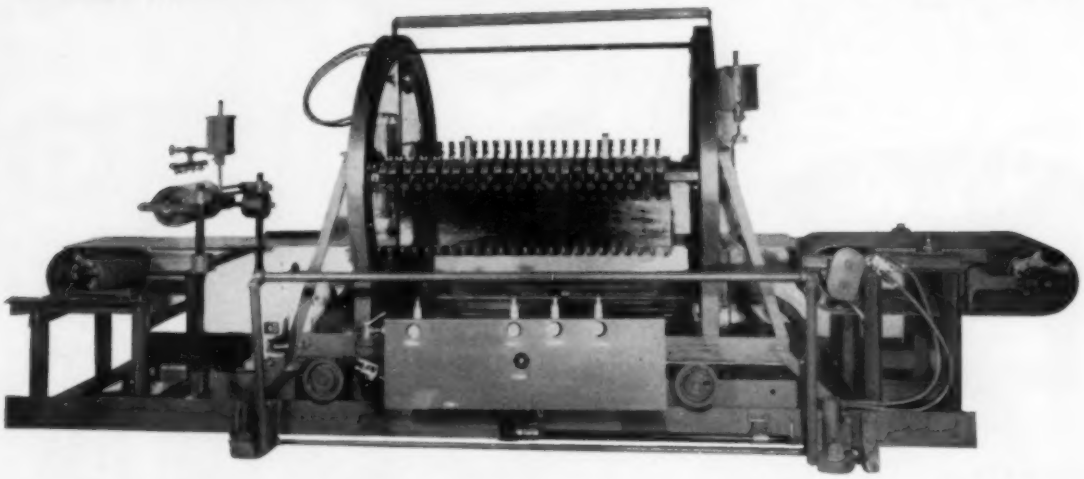
ADDRESS_____

CITY_____ STATE_____

OTHER PACO PRODUCTS INCLUDE:

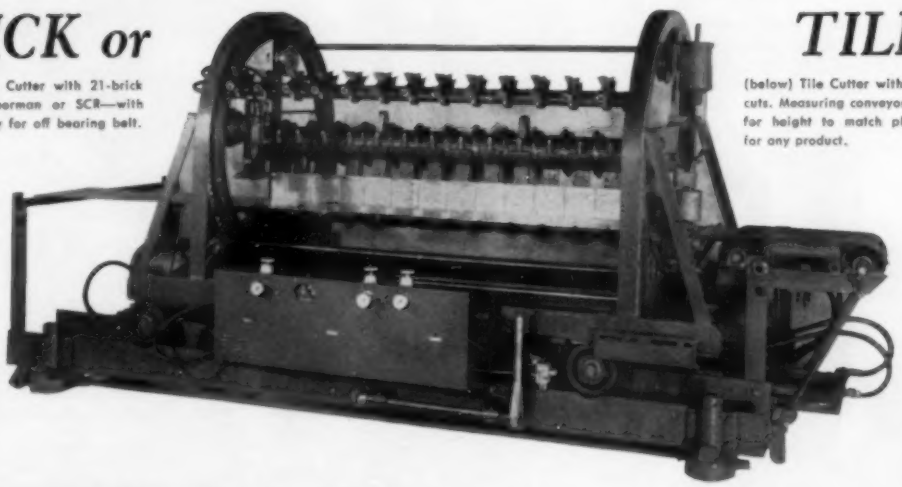
★ PACO PLASTIC
★ PACOCAST ★ PACO H.T. CEMENTS
★ PACO FIRE BRICK MORTAR
★ PACO SIDE CAR BRICK ★ PACO FIRE BRICK
★ PACO LADLE LINING
★ PACO HEATZONE COMPOUND

CHAMBERS MAKES THE CUTTERS FOR YOUR JOB!



BRICK or

(above) Brick Cutter with 21-brick platen—8" norman or SCR—with built-in pulley for off bearing belt.



TILE

(below) Tile Cutter with 12 5"-tile cuts. Measuring conveyor adjustable for height to match platen levels for any product.

CAPACITY IN CROSS SECTIONS

#32 & #33	14" x 14" 12" x 16" 8" x 18"	Green	#30 & #31	11" x 11" 9" x 13½"	Green

SPEED

Max. operating:
18 Cuts/Min.

CONTROL SYSTEM — Reciprocating motions are under air control, with tied-in air clutches to actuate rotary motion. All actuating cams are adjustable to fit any production problem, and the control valves in the main panel supply sensitive control adjustment during operation.

PLATENS—For either brick or tile, platens are built at any level to provide optimum wire cutting angles. The unique Chambers adjustable platen is ideally suited for refractories manufacture. All platens are quick-change units that do not disturb the alignment of the reel and gear assembly. In any model, platen lengths of 42", 54", or 68" can be supplied. Maximum number of brick: 27 per cut. Maximum length of tile: 5 12" pieces.

SPECIAL FEATURES—Measuring conveyor (Std., 3') can be built in any length to suit plant conditions. Off bearing belt tail pulley with take-up can be supplied with cutter (see Brick Cutter above). Lifting jack assembly can be motorized on order.

ADJUSTMENTS—One-point leveling and side adjustment guarantees perfect alignment with extruder. Measuring belt can be built with vertical adjustment if platens of different levels are used (see Tile Cutter above).

Write today for further details

SERVING YOUR INDUSTRY FOR 100 YEARS

CHAMBERS BROTHERS CO.

1857 1957

52nd & Media Streets • PHILADELPHIA 31, PA.

NEW equipment

THE LATEST IN SUPPLIER DEVELOPMENTS

Gas Fork Lift

Model FGF-20 is Baker-Raulang's new 2,000 lb., pneumatic-tired gasoline or LPG-powered fork lift truck, which was brought out recently. Turning

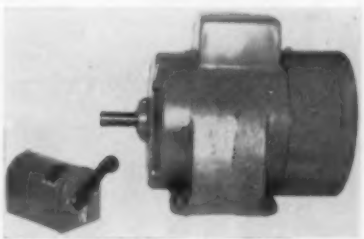
radius is 71", and FGF-20 turns into a minimum intersecting aisle 65" wide. A 29 HP engine enables the model to attain speeds up to 11.2 MPH; and drawbar pull with rated load—1500 lb. Free lift with simple cylinder is 11"—with dual cylinder, 65¾". Tilt is 8° forward and 10° back. Overall length without forks is 72¾". Baker Raulang Co., Cleveland 2, Ohio.

526/Circle on Reader's Service Coupon

Sintering Hearths

The Mace Co. manufactures sintering hearths for the production of light weight aggregate from clays, shales and fly ash in a variety of sizes. Models are available with nominal capacities from 50 cu. yds. to 300 cu. yds., and from 2 to 12 compt. The Mace Co., 28th & Blake Sts., Denver 5, Colo.

527/Circle on Reader's Service Coupon



G.E. Motors for Saws

Specially designed, capacitor-start, capacitor-run G.E. motors that are said to require up to 20% less amperage are now featured on Clipper Mfg. Co.'s new 2 HP SuperMatic masonry saw and the 1½ HP Select-A-Notch model. Rotors are treated with Dry-Film, a silicone coating said to prevent condensation or seepage from causing electrical shorting or grounding. Furnas heavy duty dual voltage switches are also featured on both types of saws. Clipper Mfg. Co., Suite 190, Kansas City 8, Mo.

528/Circle on Reader's Service Coupon

Repair Link

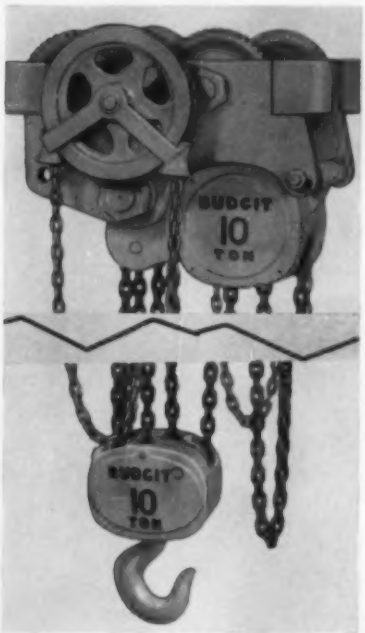
Standard cast manganese drag and hoist chains can be repaired quickly, without welding, burning, or riveting,

with a new Kensington link, available in sizes from 1" to 3". The unit consists of two identical half links and a combination key and wedge. After the half links are inserted through the ends of the chain, the wedge is driven in, automatically locking the link. Kensington Steel, Div., Poor & Co., Chicago, Ill.

529/Circle on Reader's Service Coupon

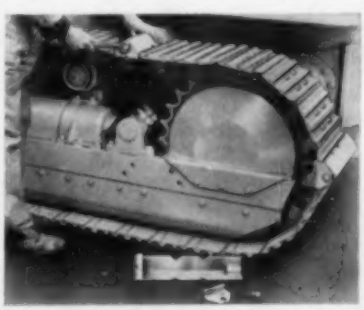
Trolley Hoists

Budgit Aluminum Army Type trolley hoists now come in models with capacities from one to ten tons—and



are adaptable to a wide range of I-beam sizes by simply rearranging spacer washers on the cross shafts. Other features include: anti-friction bearings, "equa-torque" gear design that distributes the load on two sides of each gear and sealed housings. Shaw-Box Crane & Hoist Div., Manning, Maxwell & Moore, Muskegon, Mich.

530/Circle on Reader's Service Coupon



Detachable Grousers

Case now has available grousers which bolt onto the street shoes of their 1½ and 2 cu. yd. TerraTrac crawlers to improve traction in mud, sand, or on slopes. Set of 10 (5 for each track) are said to be able to be attached with an ordinary hand wrench in 10 minutes. Special triangular design is claimed to prevent dirt from packing in back of grousers, assuring good traction even in sticky mud. J. I. Case Co., Industrial Div., Racine, Wis.

531/Circle on Reader's Service Coupon

Motor Base

Stretched and sagging belts can be tightened without stopping motors when they are mounted on American's Adjusto-Slide Motor Base. Operator simply tightens one screw. Replacement is also made easier—belt is loosened by turning screw in opposite direction. Motor base sizes and mounting hole spacing accommodates NEMA frame sizes from 182 to 326V, 1 to 30 HP. American Pulley Co., Power Transmission Div., 4200 Wissahickon Ave., Philadelphia 29, Pa.

532/Circle on Reader's Service Coupon

Dust Collector

The Joy Microdyne is a wet, inertial type unit which is reported to do the job of much larger units. This dust collector has two essential parts; a mixer section and an eliminator section and can be purchased in rated capacities up to 64,000 CFM. Joy Manufacturing Co., Oliver Bldg., Pittsburgh 22, Pa.

533/Circle on Reader's Service Coupon

Air-Powered Stretcher

Heavy duty 1¼" steel strapping can be tensioned easier with Signode's Model WN-114. Air power, which can be adjusted to the amount of tension

desired up to 3,900 lbs. does the work of strapping. A cutter attachment removes excess strapping and the rolling gripper allows strapping to be disengaged easily. Signode Steel Strapping Co., 2600 N. Western Ave., Chicago 47, Ill.

534/Circle on Reader's Service Coupon

Tractor Specifications

A fold-out specification sheet—No. MS 1192—covering the HD-16 Diesel crawler-tractor has been prepared by Allis-Chalmers. It features a cutaway view of the tractor that shows both gear-type and hydraulic torque converter transmissions. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

535/Circle on Reader's Service Coupon

Oven Bulletin

Soiltest, Inc., has issued a bulletin describing specialized ovens, water baths, and humidity chambers, designed to be used in the field or laboratory for testing soils, concrete, asphalt and other construction materials. T. W. Van Zelst, Soiltest, Inc., 4711 W. North Ave., Chicago 39, Ill.

536/Circle on Reader's Service Coupon

Pipe Sealing

An eight page flyer by Flick-Reedy describes the method which stops leaks without the use of conventional sealing compounds or dopes. Tru-Seal Div., Flick-Reedy Corp., 2040 N. Hawthorne Ave., Melrose Park, Ill.

537/Circle on Reader's Service Coupon

Sterling Motors

A condensed catalog, listing their motors, speed reducers, slo-speed gear motors; dimensions, and other information with many tables and charts, has been released by Sterling Electric Motors, Los Angeles 22, Calif.

538/Circle on Reader's Service Coupon

Bantam Crawlers

The Crawler-mounted C-35 Bantam cranes and excavators are described in a new four-page illustrated bulletin (C-101) from Schield; the bulletin contains detailed information on specifications, features, capacities and application data. Schield Bantam Co., Waverly, Iowa.

539/Circle on Reader's Service Coupon

Uses of Rapistan

A 4-page folder showing the use of Rapistan gravity and power belt conveyors in various industrial operations has recently been issued. Form IND-1 shows photos of gravity power belts used in receiving, work in process, shipping; and describes the use of "packaged" conveyor systems and portable lines. Rapids-Standard Co., Inc., Grand Rapids, Mich.

540/Circle on Reader's Service Coupon

Lift Trucks

Specifications for Allis-Chalmers lift trucks, towing tractors, and platform trucks are given in bulletin BU-450. Basic models are pictured and there is a load rating chart covering the complete line of lift trucks. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

541/Circle on Reader's Service Coupon

Clarklift-30

Available from the Industrial Truck Div., Clark Equipment Co., Battle Creek, Mich., is a six-page, four-color brochure describing design, operation and advantages of the Clarklift-30, the gas powered 3000 lb. capacity model in its new Clarklift Line of fork trucks.

542/Circle on Reader's Service Coupon

Oxygen Analysis

Information about L&N's equipment for oxygen analysis and recording for rotary kilns is now available in Data Sheet 705(1). Advantages of rotary kiln exit gas oxygen measurement are explained, and advantages of L&N equipment are described. Leeds & Northrup Co., 4934 Stenton Ave., Philadelphia 44, Pa.

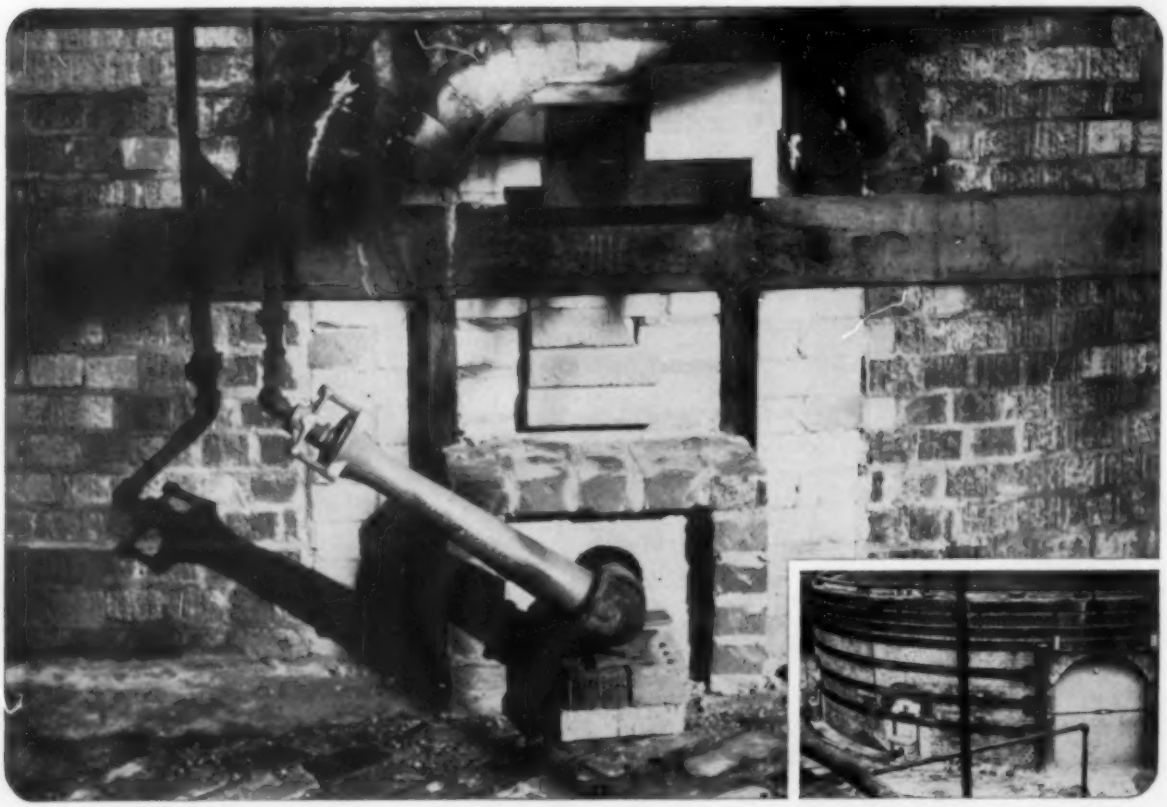
543/Circle on Reader's Service Coupon

For Further Information . . .

. . . on any of the new products or literature you see on these pages, just circle the corresponding number on the handy, tear-out, Reader's Service post card facing this page.

Drop it in the mailbox and we'll contact the manufacturers directly to see that you obtain the requested information as quickly as possible.

Alliance Clay Products Co.
Saves fuel, space, & man power



Each Periodic Kiln at Alliance Clay Products Co. is equipped with North American Kiln Burner Sets and operated by one man using one control valve. They save fuel, yard space, and man power. And there's no worry about pop-back, blowoffs, puffs, smoke, tumbles, or cold bottoms. Because of North American's *Safety Factor Design* instead of skimpy design, they get fewer brick batts without burner-babying.

For Better Brick
Buy Burners By
North American

For Gas, Oil, or Dual-Fuel Burners for periodic or tunnel kilns, consult your nearby North American Combustion Engineer.

NORTH AMERICAN COMBUSTION since 1917

the NORTH AMERICAN mfg co
Combustion Engineers
4455 East 71st St. • Cleveland 5, Ohio

It will pay you to **LEAP**

into this profitable new business...

"LIGHTWEIGHT AGGREGATE"

...but LOOK first

HERE'S WHAT YOU SHOULD KNOW!

There are hundreds of different types of clays and shales—all with different bloating characteristics.

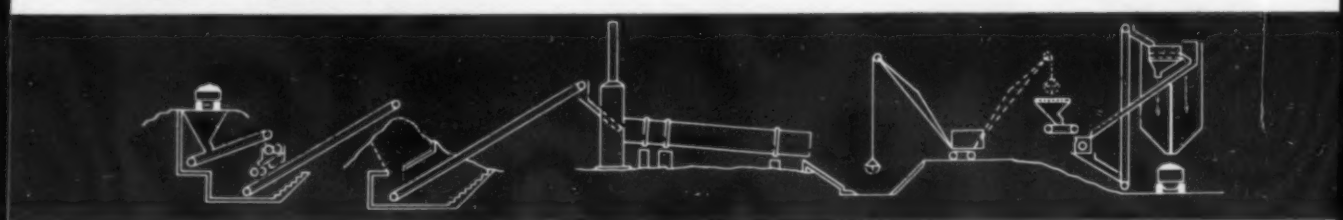
The selection of the process for preparing lightweight aggregate of the proper characteristics and size is determined by the raw material and must be made with care. McNally Pittsburg researchers, designers, and engineers have conducted a careful study of the best processing methods, and the design and construction of plants and equipment for the profitable manufacture and processing of lightweight aggregates in all parts of the country.

Last year there wasn't enough lightweight aggregate to "go around."

America's greatest Building Boom is just getting under way—and no end in sight for at least 10 years.

Builders and architects are fast turning to concrete and blocks made with lightweight aggregate!

That's why the wise operators are saying, "Let's get into a new business,'LIGHTWEIGHT AGGREGATE.'"



"Ask the men who know"

McNALLY PITTSBURG MANUFACTURING CORPORATION

DESIGNERS AND BUILDERS OF EQUIPMENT FOR BASIC INDUSTRY

COMPLETE PLANTS OR SINGLE MACHINES

Clay Disintegrators
Clinker Breakers
Conveyors • Coolers • Hoists
Jaw Crushers • Kilns
Roll Crushers • Vibrators
Apron and Reciprocating Feeders
Materials Handling Equipment

GET THIS FREE BROCHURE AND SPECIAL INFORMATION

McNally Pittsburg Mfg. Corp., Dept. B
Pittsburg, Kansas

Gentlemen:

Please send brochure on Lightweight Aggregate plants. ☐

Desired capacity of plant per day is _____.

Shale ☐ Clay ☐

Name_____ Title_____

Company_____

City and State_____

★ This is the 139th of a series of ads featuring leaders in the Concrete Products Industry who are stepping up block production with Besser Vibrapac machines.

Office of Fabrica De Mosaicos Tavares C por A, Ciudad Trujillo, Dominican Republic. Half height 8" units, 4" x 8" x 16", were offset to obtain a novel shadow effect.

Another LEADER in the Block Industry...

Dominican Republic ... Block Plant Builds Beauty with *VIBRAPAC* Block!

Executives of Fabrica De Mosaicos Tavares C por A (left to right) Antonio Thomen, Gustavo Tavares, Juan T. Tavares, President and Manuel Tavares.

One of the most successful block plants in the West Indies ... Fabrica De Mosaicos Tavares C por A ... believes in emphasizing the BEAUTY of Vibrapac Block. Their office building, shown above, is perhaps the most beautiful block plant office in existence.

This progressive Dominican Republic firm began making block in 1921. Ten years ago they installed their first Besser Vibrapac. This dependable machine turned out high quality block so rapidly, the company added another Vibrapac in 1949 and a third in 1952. Juan T. Tavares, President, states: *"Our Vibrapacs give us high production and no headaches"*. Their volume last year was 2,600,000 units (8" or equivalent).

Not content with mere *quantity* production, Tavares has always stressed *quality*. The three Besser Vibrapacs give his company *both*. And Vibrapacs can also produce high quality block for you — on a fast production basis. Ask your nearby Besser representative for literature, or write:

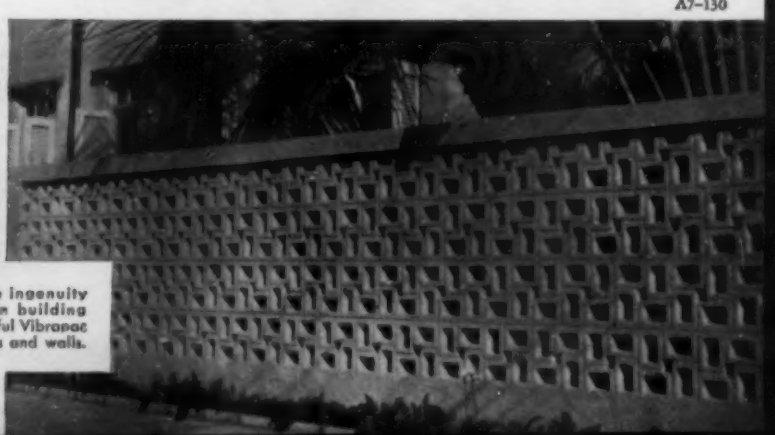
BESSER Company

DEPT. 139, ALPENA, MICHIGAN, U.S.A.

First in Concrete Block Machines

A7–130

Considerable ingenuity was used in building these beautiful Vibrapac Block fences and walls.



HERE'S LOADER MOBILITY... EXCAVATING STRENGTH

LOADS 1½ CU YD AT A PASS . . . 2¼ yd with light materials bucket. Lifts up to 11,200 lb.

WORKS RIGHT UP ON A STOCKPILE where wheels dig in. Can build stockpiles higher, store many more yards of material in a given area.

TURNS IN ITS TRACKS . . . where many smaller loaders have to jockey.

DIGS INTO HARD-PACKED MATERIAL . . . exerts 20,000-lb break-out force, with 72 net engine hp and modern bucket design.

These are just four examples of how an Allis-Chalmers HD-6G tractor shovel offers a combination of strength, traction, flotation and mobility that enables it to replace a fleet of part-time specialized machines. You can count on it to boost production indoors or out, the year 'round. Ask your Allis-Chalmers dealer about the HD-6G . . . also the three larger tractor shovels with capacities up to 4 cu yd. Allis-Chalmers, Construction Machinery Division, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS *Engineering in Action*

CUTS LOADING TIME FROM HOURS TO MINUTES

Baker YARDLOADER truck speeds deliveries to give dealer a competitive advantage!

By changing from manual to mechanized handling, a building material dealer cut his time for assembling orders and loading trucks for local delivery from hours to minutes. He can now take orders as late as 4:00 PM and make deliveries the same day.

Result: A big competitive advantage, better customer relations, more sales and greater profits.

Using a Baker YARDLOADER truck and palletized loads not only cuts his handling time and costs, but also gets more work from delivery trucks and drivers, speeds unloading of incoming materials, increases storage and warehouse capacity by high stacking, and reduces damage to materials.

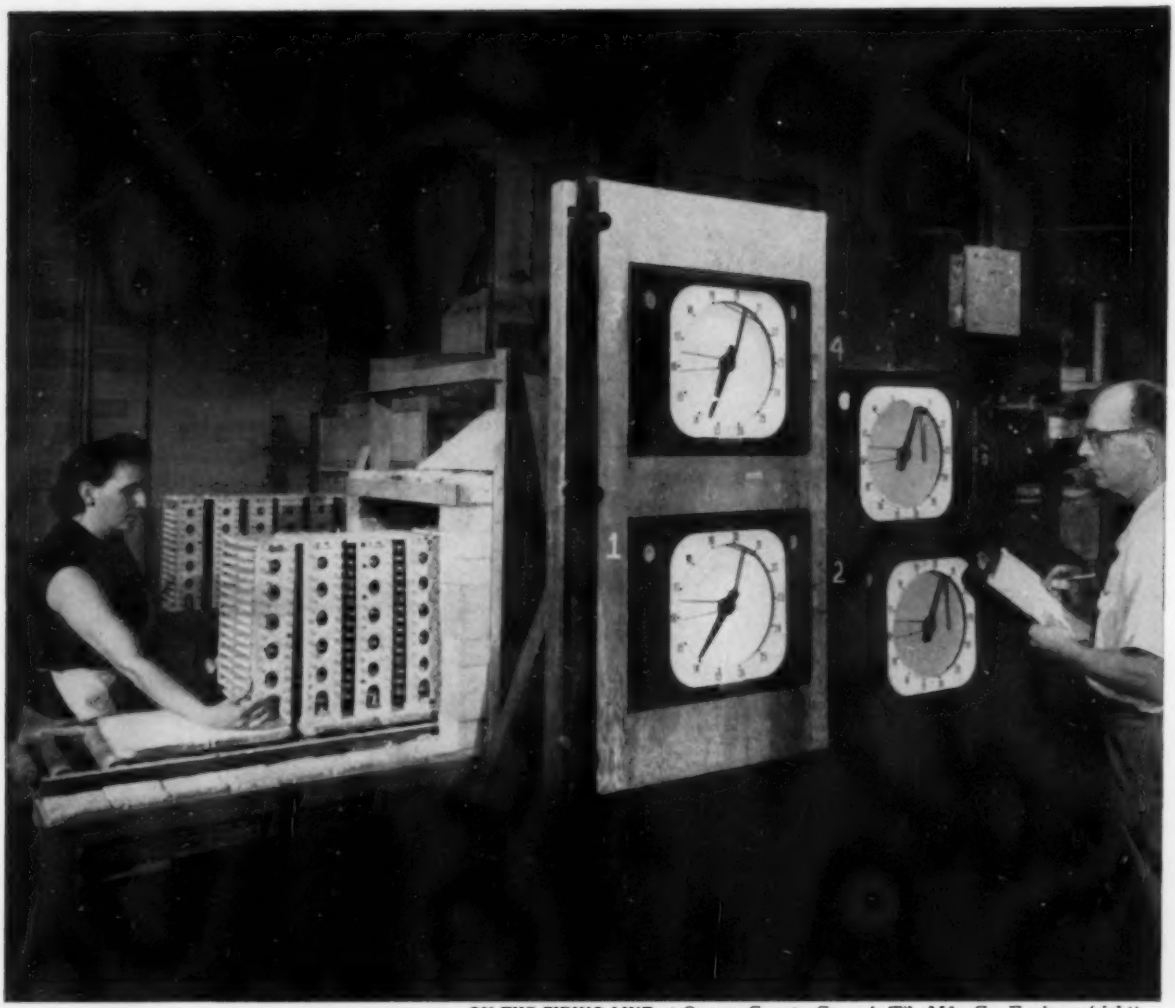
Baker "FGF" is a rugged, compact, pneumatic-tired gas fork truck designed for heavy duty. It is extremely maneuverable: Model illustrated (4,000 lb. capacity) has 48 inch wheelbase and turning radius of only 79 inches!

Write for complete information

Baker
industrial trucks

THE BAKER-RAULANG COMPANY
1271 WEST 80th STREET • CLEVELAND 2, OHIO
A Subsidiary of Otis Elevator Company

Otis



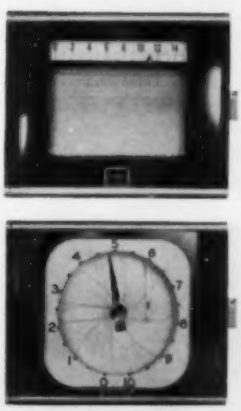
ON THE FIRING LINE at Orange County Ceramic Tile Mfg. Co. Engineer (right) checks settings on Bristol Dynamaster* Controllers as tiles are loaded on conveyor.

Fine tiles baked to a turn with precise Bristol control uniform in SIZE...COLOR...TEXTURE...STRENGTH

Strip-chart model

BRISTOL DYNAMASTER* ELECTRONIC PYROMETER CONTROLLERS

Round-chart model



That's the report from Orange County Ceramic Tile Manufacturing Company, Huntington Beach, Cal., makers of the brilliant SUNSET tile line for home and industry.

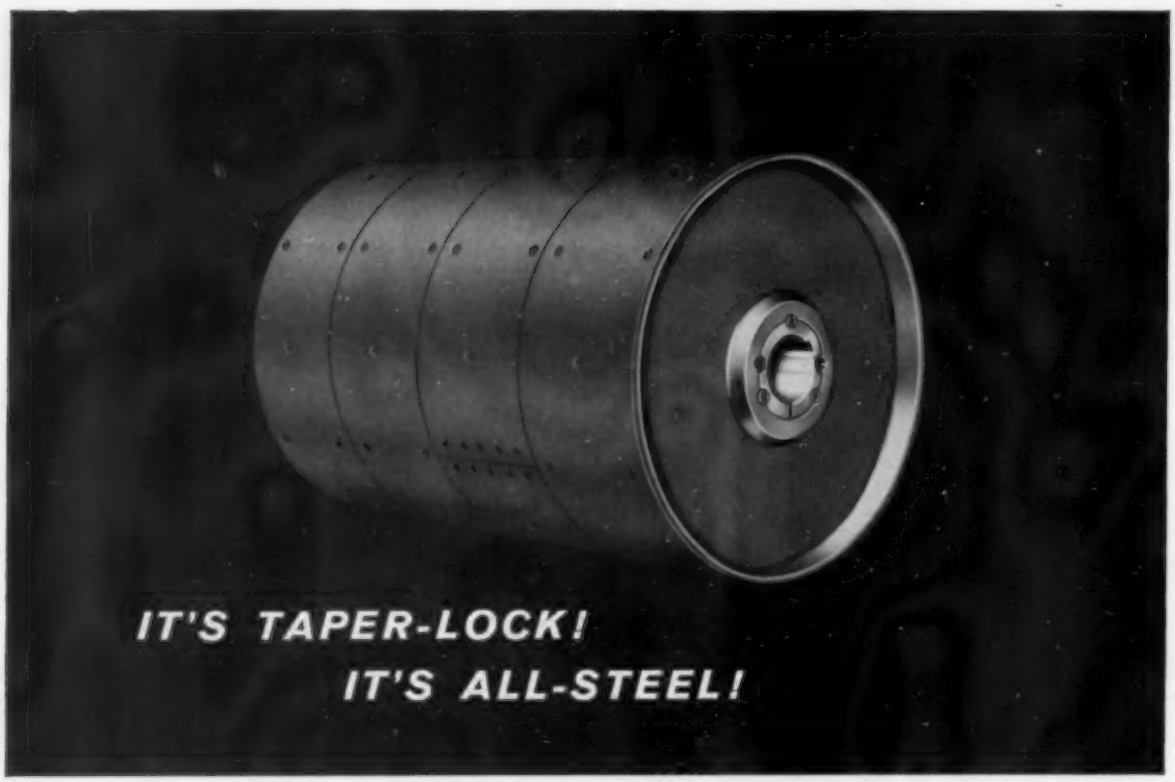
Their six Bristol round-chart Dynamaster* Electronic Instruments give accurate automatic temperature control in every phase of tile firing. The result is an exceptionally uniform product, from the size and trueness of the bisque to the exact matching of color shades in the finished glaze. What's more, automatic temperature control has reduced the need for skilled production-line supervision—freeing these men for other duties.

Are your furnace controls obsolete? Recent Bristol developments in automatic temperature control have made many instruments obsolete which are only a few years old. Find out about exclusive Bristol control features like continuous standardization for your furnace, dryer, oven or kiln. It does away with dry batteries and completely eliminates loss of time for standardizing instruments. Write: The Bristol Company, 170 Bristol Road, Waterbury 20, Conn. 7.28

*T.M. Reg. U.S. Pat. Off.

BRISTOL *TRAIL-BLAZERS IN PROCESS AUTOMATION*

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS



The modern Conveyor Pulley for superior performance . . .

One tough application after another proves beyond doubt that you can't beat a lagged, Taper-Lock Steel Conveyor Pulley for the hard jobs! Here is the score on their use in rugged coke plant service. In this particular case the installation was on belts from the quencher and loading belts to cars. The report was made after *three years of use.*

1. **One-third saving on initial cost.**
2. **Saving on maintenance; no redressing of pulley faces.**
3. **No appreciable wear on lagging.**

In addition, these Taper-Lock Steel Conveyor Pulleys provide the further benefits which are inherent in their design:

1. **No bolts to shear.**
2. **Easy on — easy off.**

Taper-Lock Steel Conveyor Pulleys have terrific impact capability. All welds are made by the submerged arc process for 100% strength. Taper-Lock's patented back-up bar permits a weld of the full rim thickness to give 100% penetration. And there are no bolts to give way!

Normally available from stock in all face widths and diameters from 6 inches to 8 feet. *Write for bulletin.*

DODGE MANUFACTURING CORPORATION, 4900 Union St., Mishawaka, Ind.

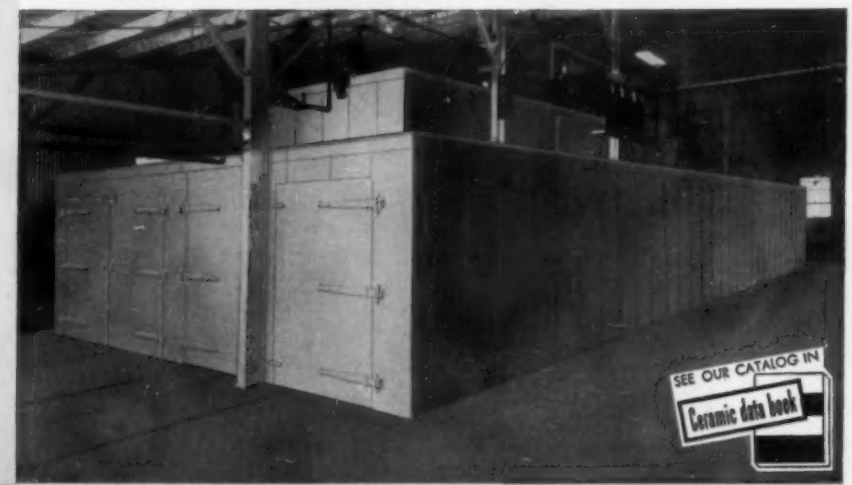
CALL THE TRANSMISSIONEER your local Dodge Distributor. Factory trained by Dodge he can give you valuable assistance on new, cost-saving methods. Look for his name under "Power Transmission Equipment" or write us.

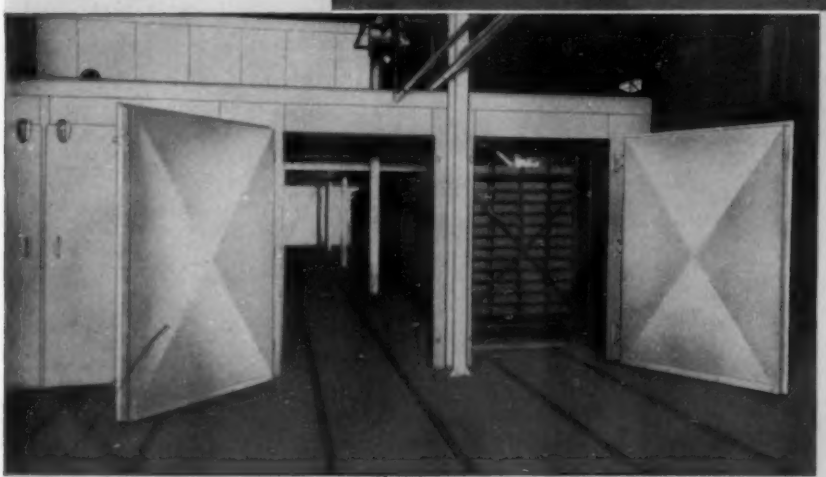
DODGE
of Mishawaka, Ind.

LANLY

Car Type Humidity Controlled Fire Brick Dryer at

NORTH AMERICAN REFRACTORIES COMPANY





Efficient, economical operation of heavy clay products dryers with assured uniform, quality control in production is effected with LANLY ceramic oven and dryer installations.

LANLY is ready and qualified to analyze your present operational set-up.

We'll gladly show you what we have done and are doing. Why not drop us a line?

a Few of the Manufacturers Producing Ceramic Products in Lanly Dryers

American Rad. & Std. Sanitary Corp.
American Vitrified Products Co.
Babcock & Wilcox Co.
Corundite Refractories, Inc.
Eljer Div., The Murray Corp. of Amer.
Evans Pipe Co., The
Gladding, McBean & Co.
Massillon Refractories Co., The
Mosaic Tile Co.
New Castle Refractories, Inc.
Robinson Clay Products Co.
Universal Potteries, Inc.

THE Lanly CO.

CERAMIC OVENS & DRYERS
765 Prospect Ave. • Cleveland, Ohio

"We are very much sold on Sanford-Day's Wheel

"From our experience and information
we have gathered from other plants
we are expecting years of trouble-free service"
102

COST-MINDED management and operating officials like those at W. G. Bush Company recognize the free-running, low maintenance values of S-D "Floater" Kiln Car Wheels. Supt. Warden is pictured above with two of his S-D "Floater" equipped Kiln Cars and is shown at left at conveyor where cars are loaded. This efficient operation helps W. G. Bush Co. supply brick to the building industry at low cost.

Let us quote on S-D "Floaters"

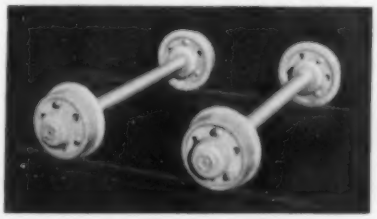
and Bearing Assembly"

Says Supt. Alvin Warden W. G. BUSH Co., Nashville, Tenn.

W. G. Bush Company started using our S-D "Floater" Wheels in April last year. They have been checked about every sixty days and "we find we are using very little lubricant," Mr. Warden reports. He further states they have had no bearing trouble and "we are expecting years of trouble-free service."

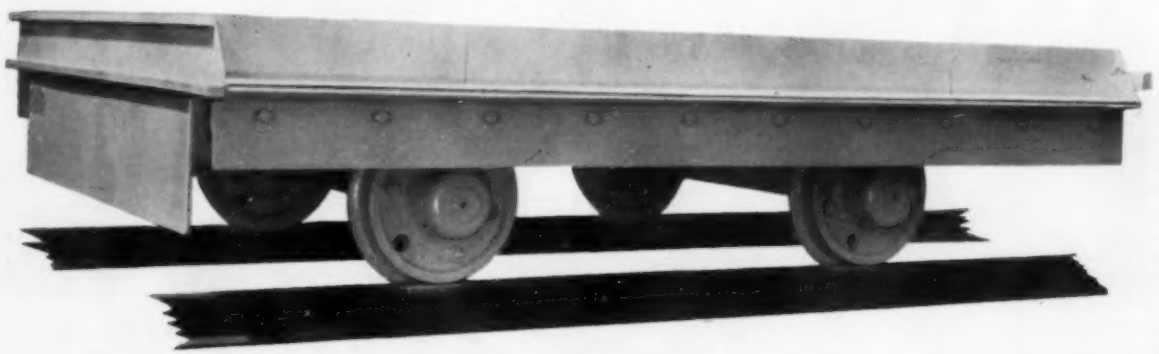
In scores of brick plants all over the nation, hundreds of S-D "Floaters" have replaced conventional roller type kiln car wheels, which have no grease seals and require frequent lubrication.

The new improved S-D Kiln Car Wheel runs free and easy (one man can push a loaded car equipped with S-D "Floaters"). It eliminates high cost maintenance and lubrication.



Inset photo shows a car set of S-D Ball Bearing Kiln Car Wheels and Axles. Note that the outer hub of wheel is completely closed. The inner hub is protected by two metal grease seals. This feature effectively eliminates dust while retaining the special high temperature lubricant.

Many sizes and styles are available so that you can use S-D "Floaters" on your present cars. Ask us for complete information. Or, send us a photostatic copy or blueprint of your present cars. With this information we can quote you on replacement wheels. Simply address inquiry to *Sanford-Day Iron Works, Inc., P. O. Box 1511, Knoxville, Tenn.* Your request will be handled promptly.

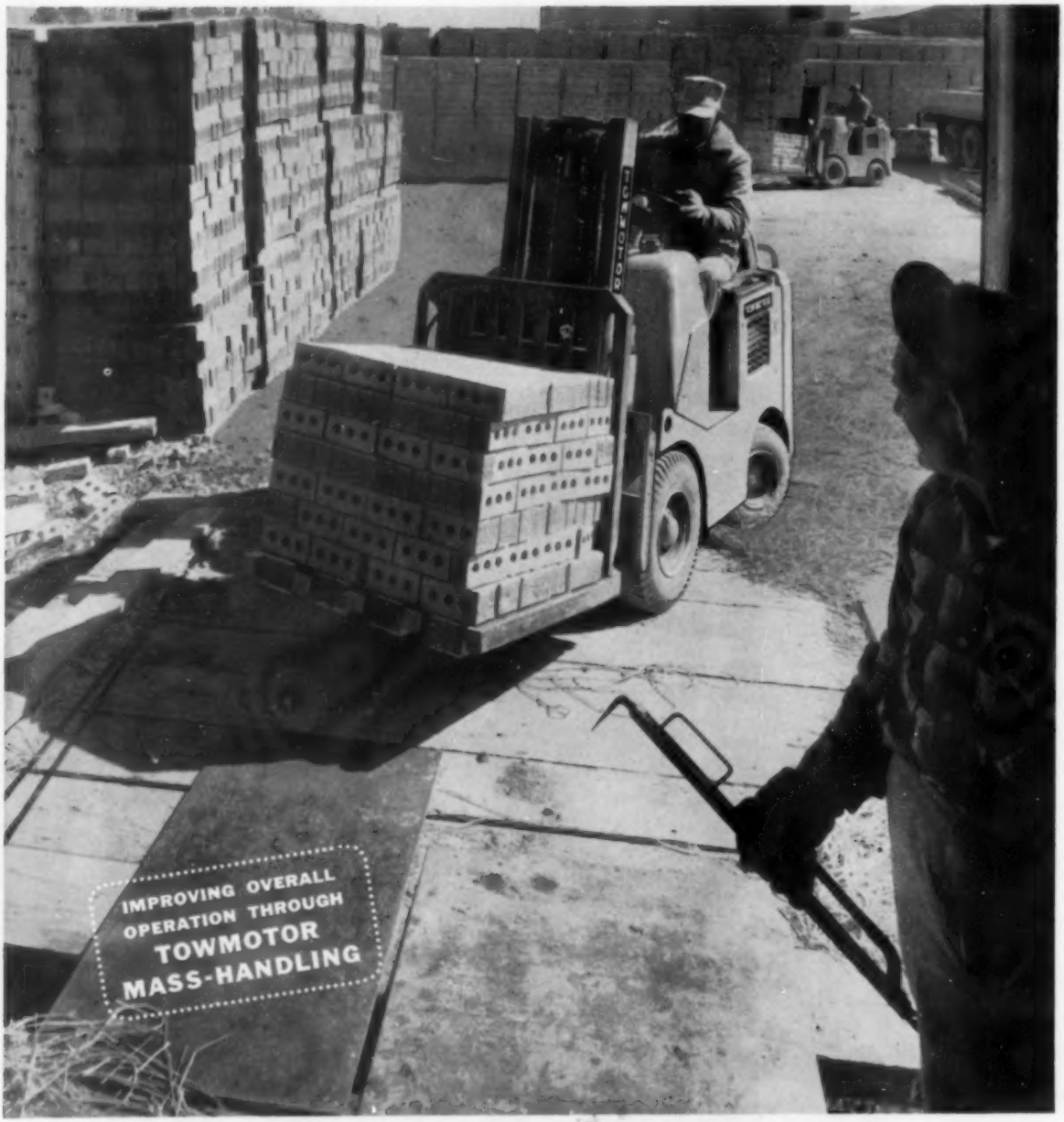


"SUPER MARKET FOR MINE CARS" — all types ★ PRECISION WHEELS ★ "BROWNIE" HOISTS, CAR RETARDERS, SPOTTERS, PUMPS AND OIL SPRAY SYSTEMS ★ GISMO SELF-LOADING TRANSPORT that loads (mucks) in development or production . . . transports . . . supports 2 to 3 jib mounted drills . . . back fills . . . moves boulder rocks . . . makes its own roadways and cleans up completely — a new method of hard rock mining offering a tremendous reduction in cost per ton! *Sanford-Day Iron Works, Inc., Knoxville, Tennessee.*

SANFORD-DAY

Knoxville, Tennessee

for your present cars . . . mail us blueprint of your cars today!



...here's "manpower" that hands you a bonus!

Think how many of your plant's handling jobs can be accomplished with much less effort—swiftly and profitably—by one operator "teamed up" with a powerful Towmotor fork lift truck!

You get an entirely new concept of modern mass-handling. You get a "bonus" in extra profits because you multiply manpower with the payroll you have. And you get a bonus in plant-wide morale when work flows on-schedule through every department . . . effortlessly . . . with a bigger day's work done.

Called the "ideal" fork lift truck by management and operators alike, the latest Towmotor models offer exclusive features as advanced as these, at no extra cost:

- New-concept functional engineering
- Simplified dual-entry compartment
- Full-traction weight distribution
- Adjustable off-center visibility
- New *motion-studied* centralized control
- Towmotor improved precision steering

Power steering, 'TowmoTorque' Drive at extra cost

These and 60 other points of superiority are described in Towmotor booklet SP-23 for comparison. Get a copy from Towmotor Corporation, Cleveland 10, Ohio.

Leaders for 38 years in building Fork Lift Trucks and Tractors

TOWMOTOR — THE ONE MAN GANG® — GERLINGER

Gerlinger Carrier Co., Dallas, Oregon, is a subsidiary of Towmotor Corporation, Cleveland, Ohio

Why buy 2 rigs...when 1 will do?

New Case® TerraTrac®

"2-in-1" Loader-Dozer

Saves investment!
Cuts operating cost!

If you need a front-end loader, as well as a dozer — but don't have full-time work for *both* — there's no longer any need to buy *two* machines and hire *two* separate operators to run them.

Now, for only a few dollars more than the cost of a *single*-purpose rig, you can get a *multi*-purpose Case TerraTrac crawler, with combination loader and dozer. This gives you the *versatility* of two highly efficient work-tools, with the *economy* of one tractor, one hydraulic system, and one operator.

With optional *bulldozer or angledozer*, you can clear land, build access roads, do light stripping, filling, etc. Then you simply pull four pins . . . detach dozer and lift arms . . . and you're ready in 5 minutes to work the *loader* . . . for loading trucks and hoppers, stockpiling, materials-handling, clean-up, and many other jobs.

Capacities up to 2 cu. yds.

Case TerraTrac combination loader-dozer units are available in 10 gasoline and diesel-powered models — *from 42 to 100 HP, with ⅝ to 2-cu. yd. buckets.* Largest models feature torque-converter drive and exclusive counter-rotating Terramatic transmission, with instant power-shift, and power-steering, which give you much higher working speeds and greater ease of maneuverability than any conventional crawler tractor. These larger Case TerraTrac units also give you the important advantage of torsion-bar track suspension and automatic track roller lubrication, which cuts greasing time from once a day to a few times a year. Mail coupon today for complete facts on sizes best suited to your needs.

CASE

1st in quality
for over 100 years

Clip . . . mail for free catalog

J. I. CASE CO., Dept. H1367, Racine, Wis., U.S.A.

Send free catalog on Case TerraTrac loader-dozer units checked.

☐ 2 yd. ☐ 1½ yd. ☐ 1 yd. ☐ ¾ yd. ☐ ⅝ yd.

Name ..... Title .....

Company .....

Address .....

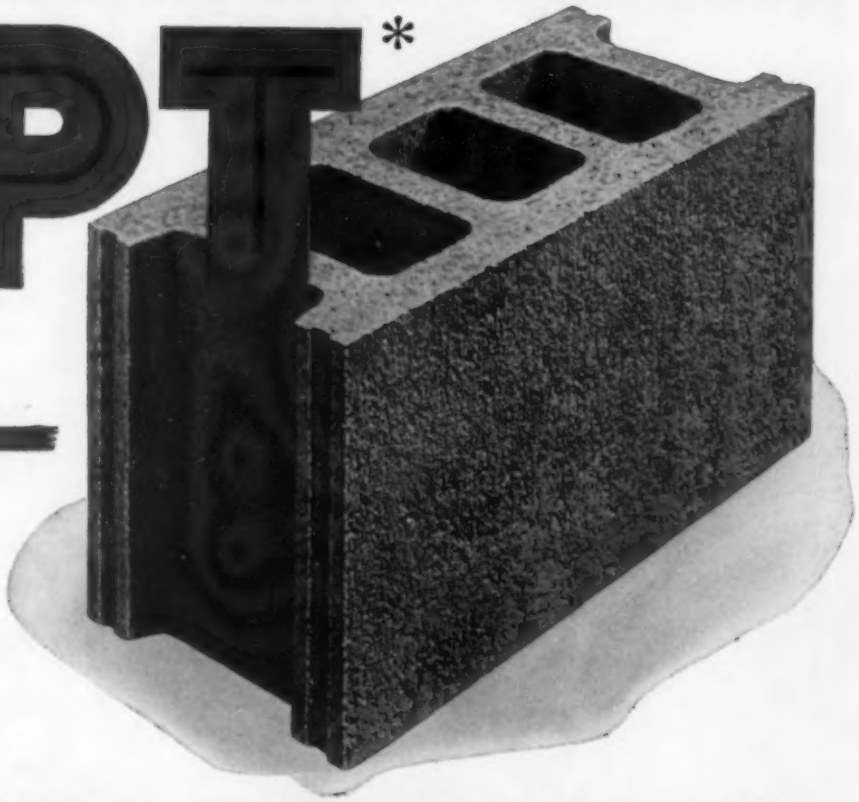
City ..... State .....

CT-LD-74

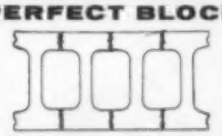
Industrial Wheel and Crawler Tractors • Loaders • Dozers • Backhoes • Engines

Another BESSER Achievement

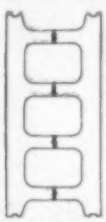
U P T*



Evolution of the PERFECT BLOCK



1924 — Besser introduced the Plain Pallet Stripper Tamper. Core plate marks were visible on the top face of each block.



1936 — Besser turned the block around, thereby moving the core plate marks to the center of the web. This was a great improvement.

1955 — Besser swung the stripper shoes UNDER the core plates, thereby eliminating ALL core plate marks on the block.

FIRST IN PRODUCING A BUILDING BLOCK WITH UNI-PRESSED TOP*

Again Besser forges ahead with another FIRST in the Concrete Block Industry. This time it's U.P.T. . . . a block with *Uni-Pressed Top* . . . entire top surface made smooth. Note these new U.P.T. features:

- **Block has no machine marks, whatsoever.**
- **All six sides are now smooth.**
- **Concrete under core bar—packed the same density as rest of block.**
- **Higher division plate required, provides means for packing block edges better.**
- **Materially reduces grinding on floor filler units — as block is smooth.**
- **Makes perfect job of pressure grouting floor and roof planks — no weak points in center of block.**

U.P.T. attachments are available in 3 core, 2 core and floor & roof filler block. Get all the facts from your Besser representative, or write:

BESSER VIBRAPAC — the fully automatic concrete block machine. Produces high quality masonry units, of any desired texture and density, at the lowest possible cost.

A-9770-R2

BESSER COMPANY

World's Leading Manufacturer of Concrete Block Machinery

ALPENA, MICHIGAN, U. S. A.

Brick & Clay Record

August 1957 Vol. 131, No. 2

5 SOUTH WABASH AVE.
CHICAGO 3, ILL.
FRanklin 2-6880

Established 1892, now in 66th year.

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BRICK AND CLAY RECORD is indexed by Engineering Index, Inc.

Salesmen Or Errand Boys?

Architect Frank Bull of Atlanta, in a talk before the Southern Brick & Tile Association, said:

"When we decide to use a brick, there is plenty of help in looking at colors, textures, prices. You give the whistle two toots and in two days you have enough samples to build a small patio, with barbeque pit and dressing rooms. But who comes around to sell the idea of using brick? The mailman, and he doesn't have his heart in it."

"The mailman brings the same poundage on concrete block, glass block, and gypsum block and so forth, and so forth."

Such a statement is a damaging one and one that can apply to many industries, not just brick and tile.

To the brick manufacturer, it should mean that if he is not doing a basic selling job on brick, probably his staff is not big enough to do this job and is constantly chasing bids and being an errand boy by such work as delivering samples to architects.

Sales budgets are too inadequate. The floor and wall tile industry will average spending 11¢ per sq. ft. for sales expenses on a product that sells at 50¢. Is that much spent on brick? One floor and wall tile plant, for instance, has five full time salesmen selling $500,000 in products. We know of several brick manufacturers doing much more business with only one man selling. We're convinced that there aren't enough salesmen employed.

Certainly much of our brick is sold by dealers, and manufacturers lean on them for selling. Dealers too are many times in the same boat—they don't sell brick but just chase orders. Your salesmen have to keep after the dealer to help him sell better. Do you have enough men to properly service dealers?

The manufacturer, too, should look over his sales training programs. Are the salesmen and dealers being trained properly to do a brick selling job? Does the manufacturer have periodic refresher courses to review how brick should be sold? Is he constantly adding new ideas on selling to the dealers and salesmen? And of course, in these periodic refresher courses, re-instilling a lot of spirit into the salesmen?

Architect Bull has certainly given this industry something to think about and something on which to take action.

The Editors

Operators like the way these two Allis-Chalmers 6,000-lb lift trucks maneuver, even in close quarters. The trucks are working in a Los Angeles brickyard.

Operators like them best...drive them best

ALLIS-CHALMERS FORK TRUCKS

"Feels like a car with power steering," says Arthur B. Wiley, fork truck driver at a Michigan factory. Further, an Allis-Chalmers truck "works fine in narrow aisles. It has no controls on the floor — easy to get on and off of."

Center-point steering gives the same easy responsiveness as a moving auto. Full 18-in. steering wheel completes the familiar "feel."

"Must have been engineered for the driver," says operator Gast at a Wisconsin foundry. "Shifting is handy and I like where the controls are located. Have plenty of room for driving."

Controls are right at the operator's finger tips. Gauges are in plain sight. Floor is clear, seat can be moved ahead or back to suit the operator.

"I just like the whole machine — everything about it," sums up John Cromer, operator at a Missouri plant. "It's a work horse. It handles and operates smoother and performs better than others we have had in the plant."

Outstanding performance starts with the Allis-Chalmers industrial heavy-duty engine. It provides extremely high torque in relation to rated capacity for smooth operation, climbing grades, moving heavy loads.

Put Yourself in the Driver's Seat tells more about why operators "like them best . . . drive them best." Send for your free copy of this interesting booklet — and see your Allis-Chalmers material handling dealer.

ALLIS-CHALMERS, MATERIAL HANDLING DEPT., BUDA DIVISION, MILWAUKEE 1, WISCONSIN

ALLIS-CHALMERS

BH-52A

Who Are You Kidding?

Are clay products underpriced? Should prices be increased? These are basic and vital questions in every operator's mind today and the answer to both is yes.

A private study of this industry revealed some appalling weaknesses in top management. Among other things, it stated that executives were poorly paid, sales vigor is lacking, and reserves do not reflect today's excellent market conditions. Scoring the VALUES of a company (according to American Institute of Management's recent audit), executive evaluation, sales vigor, production efficiency and fiscal policies rate highest in importance, yet they are the weakest in this field. Proper and adequate pricing would cure these ills by bringing in revenue needed to do a real operating and selling job.

Scared of Price Cutters?

There is a stumbling block, however; it seems that many manufacturers are "running scared" lest a competitor undersell them. Why not let the low pricer load up on giveaway business? Today's market is adequate for all and the premium business is there too. Low prices will curtail quality service so that not only will the low price hog be unable to take more orders but will lose confidence because of this poor service.

Another stumbling block is the fear of substitute competition. Clay products are quality merchandise and not usually purchased on a price basis. Even if brick cost nothing, a brick home would still cost more than one of frame. Quality over price goes beyond brick and tile and encompasses other clay products such as pipe and flue lining.

Could Attract Quality Personnel

A substantial increase in prices would remedy the executive situation attracting quality personnel for the top jobs, individuals that know how to merchandise, promote, coordinate, modernize and finally spell success. Better personnel would certainly cost more but the profit would also be greater, so the company would be better off. Earning profits by operating with mediocre help earns mediocre profits.

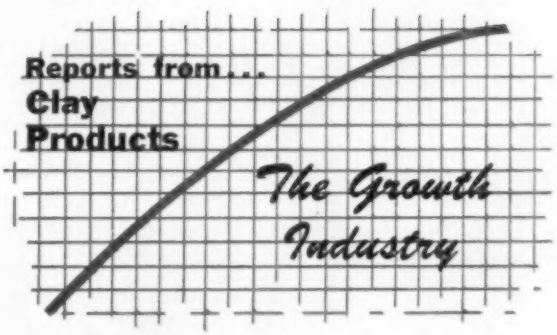
An increase would certainly build adequate reserves to take care of obsolescence, which is becoming an important factor in today's factory management.

Unfortunately, the weaker companies pull down the stronger ones. We see only one way out if the industry is to grow into its full potential. The products of the industry should be priced higher to more nearly share the burdens that an aggressive and prosperous business should assume.

It takes no genius to make a profit in today's market but if the profit is small, we're just kidding ourselves.

Be content with your company only if you build adequate reserves, have capable executives and merchandising talent.

Ed. Note: We were surprised at a recent meeting to hear comments on the above item, an editorial that ran more than a year ago, in June, 1956. Because of this continued comment and requests, we reprint it in full.



Do We Need A Luxury Product?

For a long time we've been selling the long-term low price of clay products and the economy of brick. We've been working to hold prices down so each and every customer could afford brick housing.

Maybe there's an opportunity for a Cadillac product too. After a certain per cent of a man's salary potential is reached, the necessities of life diminish as a spending factor. After a certain point pay raises and overtime go for the luxuries of life.

Higher Percentage For Luxury

In the high-income bracket a much larger percentage of earnings goes for pure luxury and custom products.

It might well be that there is room for development in our industry of a Cadillac product . . . one that's pure luxury, aimed at the custom trade.

Could we design a product to sell at a premium price that would make one man's brick house totally different from the other brick houses nearby? Could we develop a high-priced brick for partial use, say on fireplaces or for an interior wall?

The product could have many features that ordinary, mass produced brick doesn't have—rare color, special matching, unusual shapes, different sizes. These could be made to custom order at a premium price.

There might be room in our expanding, luxury-inclined economy for such a product.

NEWS OF THE INDUSTRY

$1.5 Million Lehigh Plant Begins Operation

The new $1.5 million plant of Lehigh Sewer Pipe & Tile Co. went into final stages of testing recently and was planned to be in full operation by midsummer.

The new plant includes a 400-foot tunnel kiln, according to vice president-general manager Joe Bryant. Automatic finishing and handling equipment has been installed, including two new auger machines.

Previous Lehigh production at the Fort Dodge area should be about doubled with use of the new facilities, Bryant said. The plant, now with about 160 employees, will eventually employ about 200. The old plant will continue to operate, making mostly large diameter pipe, with the new plant turning out four and five-foot lengths.

Lehigh president G. L. Avery was on hand for opening ceremonies and was honored at a special lunch in Fort Dodge (see news item elsewhere).

Producers' Council To Meet Sept. 25-27

The 36th annual convention of Chapter President's Conference of the Producers' Council will be held on Sept. 25-27 at the Brown Hotel, Louisville, Ky.

Automation, New Plant To Double Wadsworth Output

An almost entirely automatic operation is planned for the new plant soon to go into production at Wadsworth (Ohio) Brick & Tile.

With a tunnel kiln operation at the plant, President Harold B. Epler reported that present production of 20 million annually will be doubled to 40 million when the plant begins operation sometime this fall.

Larson Slip Seal Plant Hit by Fire

Unofficial estimates were that $50,000 of damage was done to a slip seal building, destroyed by fire on July 21, at Larson Clay Products Co., New Philadelphia, Ohio.

Reports were that the building, containing tar and equipment for applying slip seal to pipe was nearly a total loss.

Officials of Larson said the fire will not hold up slip seal production but will hinder operations for a time. Cause of the fire was undetermined.

Dallas LW Earnings

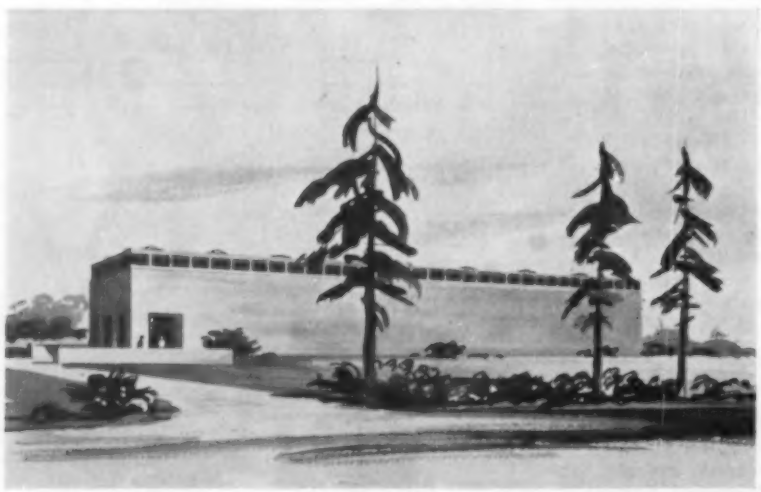
Ralph B. Rogers, president of Texas Industries, Inc., reports earnings of $85,842 after taxes for the firm's subsidiary, Dallas Lightweight Aggregate Co., during the fiscal year ending May 31. Sales for that period amounted to some $560,000.

Record Half Sales, Earnings for Gladding, McBean

Gladding, McBean & Co. had record first half sales and earnings, President C. W. Planje has announced. Net income for the half increased 20% to $1.7 million or $2.17 per share. This compares with 1956 figures of $1.4 million or $1.81.

Sales for the period increased 9% to $17.5 million, compared to $16 last year.

Clay Pipe Assoc. To Build New Research Laboratory



The National Clay Pipe Manufacturers Association will build a new research building and laboratory facilities to house the industry's expanded research program, it was announced by D. M. Strickland, president.

The new laboratory will be located in Crystal Lake, Ill., 43 miles northwest of Chicago. Five acres of land have been acquired on Route 176 near the city limits of Crystal Lake. Construction of the building will begin in a few weeks.

For several years the industry research laboratory has been located in Los Angeles, Calif. In addition to work done in this laboratory, other projects have ben assigned to industrial research organizations and universities throughout the country. The construction of the new laboratory will serve to centralize the research effort of the industry so that work on related problems can be concentrated in one location.

The new building was designed by Architects George Fred Keck and William Keck of Chicago. Architecturally, the structure will be a striking example of contemporary design. It will incorporate the maximum use of clay products in both interior and exterior. A unique design feature is the maximum utilization of natural light, by means of the latest design of skydomes.

This technique of natural overhead lighting offers the further advantage of providing large, unbroken brick walls in the laboratory area which will permit efficient utilization of space for research and test work. The office area will be covered by a mezzanine floor which will house small unit laboratories and will also permit future expansion of office facilities if required.

The building plans are completed and construction is expected to be completed by this fall.

Notice

Phone Change

Effective June 1, the office phone number of BRICK & CLAY RECORD and other Industrial Publication magazines was changed to FRanklin 2-6880.

This change will allow more lines to handle our constantly-increasing volume of calls from readers, advertisers and others. Please make a note of our new number: FRanklin 2-6880.

Lawrence, Jensen Join Pomona Terra-Cotta

Appointment of E. M. Lawrence as vice-president, sales, and of Charles Jensen as Wedge-Lock sales and promotion manager has been announced by W. C. Boren III, president of Pomona Terra-Cotta Co., Greensboro, N. C.

Lawrence

Jensen

Lawrence recently was vice president-sales manager for Pacific Clay Products, and has been an NCPMI board member. Jensen recently was a regional sales engineer with Atlas Mineral Products Co., Mertztown, Pa.

Region 5 Honors Crissey, Poston; Names Tuthill

James Tuthill, president of Tuthill Building Material Co., was elected to the SCPI-Region 5 board of directors at the mid-summer meeting in Chicago.

Norman H. Crissey received a "distinguished service plaque." In addition, Crissey of Chicago Brick was elected vice president after serving six years as treasurer.

A similar service award was given to W. Irvin Poston, of Poston-Herron Brick Co., who is the retiring president of Region 5.

ECSA To Meet August 26-27

The mid-year meeting of the Expanded Clay & Shale Assn. will be held in Knoxville, Tenn., on August 26-27. Host for the meeting will be Shalite Corp. of Knoxville. Home base for the activity will be the Andrew Johnson hotel.

Metal vs. Masonry At Natco Southern Meet

Highlight of a recent Southern Sales Conference for Natco Corp., held in Birmingham, was a discussion of metal skin vs. masonry by Al Walsh, SCPI promotion director, and Bob Turner, director of the Facing Tile Institute.

Natco southern sales manager K. H. Potts reports that other speakers included general sales manager Harry Toner, vice president in charge of production Lew Bretz. Other Natco speakers included Potts, Harry Papier, Eddie Wanner and several others. Also taking part was Bill Coates, Jim Traylor and John Mathers, who led a discussion period.

Potts notes that many area architects were invited to hear the metal vs. masonry discussion, with a good turnout of 26 in attendance.

Book On Schools Released by AMC

A 32-page book, designed to tell the average citizen the basic facts of school construction, has been published by the Allied Masonry Council.

The title of the book is "A Citizen's Guide to Low Cost School Construction." Topics covered include tips on advance planning, site selection, design, economy, fire safety, etc. Copies are available from the Allied Masonry Council, 1520 18th St., Washington, D. C.

Lead Industry Sets Up Ceramic Research Grant

According to an announcement by the Lead Industries Association, a new grant for research in ceramics has been established.

This is the third of a series of fellowship grants for ceramic research, with the new grant made to Ohio State University, with direction to be by Prof. John Carruthers, chairman of the school's ceramic engineering department.

The new program will be directed toward new fields for ceramic glazes for clay pipe. Two previous fellowships went to Rutgers and the University of Illinois.

$500,000 Atlas Plant To Go Up In 1958

Further plans have been announced with details of the new Atlas Tile & Brick Co. plant to be built near Jackson, Miss. Secretary-treasurer Paul James has revealed that the operation will include two tunnel kilns with estimated daily output of 60,000 units.

The half-million dollar plant should be under construction in a year or so, James says, to manufacture glazed structural tile, face and Roman brick. Common stock is being sold only to Mississippians.

Enough clay is contained in leased deposits for 40 years, geologists report, with the clay claimed to be of unusually high quality.

President of Atlas is L. C. Guillot of Jackson. H. J. Nicholas is vice president.

Sales, Earnings Up for Pacific Clay

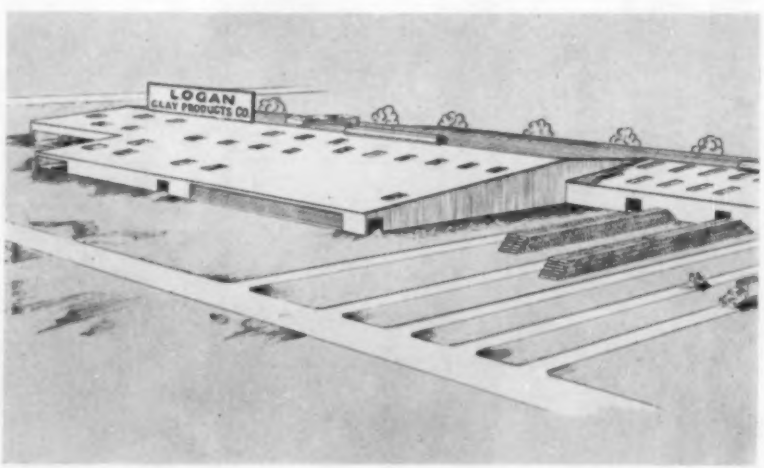
Sales and earnings of Pacific Clay Products in the first half of 1957 were higher than for the same period last year, John D. Fredericks, president of the Los Angeles firm, has announced.

For the six months ended in June, net sales and other income totaled $4.5 million, compared with $4 million for the same period last year.

After all charges, net income amounted to $670,443, equal to $1.30 per share as compared to 1956 figures of $613,069 or $1.19.

Fredericks also announced that the new tunnel kiln at Los Nietos, the second at the plant, was substantially complete and test runs are now under way. The kiln will increase plant production by one third.

$1 Million New Logan Plant



In May, we reported the announcement by Barton A. Holl, president, that Logan Clay Products of Ohio is building a new $1 million plant. Shown above is an artist's conception of the plant, with the building to occupy 52,000 sq. ft.; a 480x70-foot main building and a 200x90-foot wing. The plant is adjacent to the present plant area.

NEWS OF THE INDUSTRY

Sixth Clay Conference Aug. 19 at Univ. of Calif.

The Sixth National Conference on Clays and Clay Technology will be held at the University of California, Berkeley, from August 19-23.

All interested in any phase of fundamental studies of clay minerals and technology were invited to attend.

Meeting directors were to be Joseph A. Pask, chairman of the University Division of Mineral Technology, and Adolph Pabst, University Department of Geology.

Special Lunch Honors Four Iowa Brick Plants

The clay products industry of Webster county, Iowa, was honored by a special lunch sponsored in late July by the Fort Dodge chamber of commerce.

Companies honored were Johnston Brick & Clay Works, Kalo Brick & Tile Co., Lehigh Sewer Pipe Co., and Vincent Clay Products Co. Approximately 100 attended the lunch.

The reason for the lunch was to pay tribute to the importance of the clay products industry to the county. A special speaker was George L. Avery, of Lehigh, who reported on his new plant. (See full story elsewhere in news pages.)

Robinson B&T Shows New Glazed Brick

Robinson Brick & Tile Co., Denver, has placed on the market a new matt glazed brick. F. George Robinson said the new brick is the first glazed brick in the area to be produced with a textured surface.

Some 31,000 units of the new sage green brick will be put into a Denver junior high school, Robinson said. Another 15,000 blue brick will be used on another school. Other colors available include pink and regular and charcoal gray.

Penn. ACS Group Meets at Penn. State

The Twelfth Annual Spring Meeting of the Pennsylvania Ceramics Association held at Pennsylvania State University, University Park, Pa., on June 20 to 22, 1957, was well attended and many subjects of interest to management and technical personnel were covered by the various speakers.

Harold E. White, vice president of Lava Crucible-Refractories Co. and president of PCA, served as master of ceremonies.

John D. Clark of Foote Mineral Co. was chairman of the first session and Prof. F. A. Hummel of Pennsylvania State University handled the second session. The group in attendance was welcomed by Dean E. F. Osborn of the College of Mineral Industries of Pennsylvania State University.

Dr. Carlyle S. Gray, state geologist, director, Bureau of Topographical and Geological Survey of Pennsylvania, outlined the fine work being done by that bureau.

Dr. M. L. Keith, director, Mineral Conservation Section of Penn State U., explained the work of the experimental station along ceramic lines.

The group was treated to quite a talk by John Wayman, Esq., labor consultant of Reed, Smith, Shaw and McClay, attorneys of Pittsburgh, Pa. Mr. Wayman has been quite an arbitrator in labor disputes.

Prof. Robert B. Hewes of the Mineral Industries Extension of Penn State U., talked on management workshops covering training and development and how it worked at various localities.

Dr. E. R. Weidlein's talk on "The Impact of Research on the Economy of the Country" was one of the highlights at the annual banquet held in the Nittany Lion Inn with a capacity audience.

The association is in excellent condition and looking forward to the annual PCA-Penn State-Pittsburgh Section of the American Ceramic Society night to be held in the Mellon Institute on Oct. 8, 1957.

"Belle" and "Spigotte" At Plumbing Show

The Wedge-Lock twins, Belle and Spigotte (shown above) were added starters at a recent Nat'l. Assoc. of Plumbing Contractors Convention in Dallas. Two girls served as hostesses, answered questions about Wedge-Lock, passed out brochures, and generally attracted attention for themselves and Wedge-Lock.

Gladding, McBean Shareholders Approve 2 For 1 Stock Split

Shareholders of Gladding, McBean & Co., at a special meeting, approved a 2-for-1 split in the capital stock of the company. This action increases the number of shares authorized from 1,250,000 to 2,500,000 and reduces the par value of the shares from $10 to $5.

C. W. Planje, president, announced that the general management of Gladding, McBean & Co. intends to recommend a 25¢ per share quarterly dividend rate on the new shares. The increased dividend, if approved, will apply to dividends payable in the fourth quarter of this year, Planje stated. Quarterly dividends on the old shares were paid at the rate of 35¢ per share.

Brick School Classroom Withstands Atomic Blast

Ed. Note: The above item appeared in its entirety in the July issue. However, the photo was unavailable at that time. Also, since this is so vitally important to our industry, and tied in with the report on the SCPRF meeting, we decided it was worthwhile to re-run this item for the convenience of our readers.

A full sized reinforced brick school structure successfully withstood the effect of an atomic blast during the 1957 "Plumbbob" nuclear test series, the Federal Civil Defense Administration announced at a July 10 news conference at Las Vegas, Nev.

The structure, which was designed by the Structural Clay Products Research Foundation, Geneva, Illinois, research arm of the nation's brick and structural tile industry, was one of five structures under test to evaluate new reinforced brick and tile wall designs.

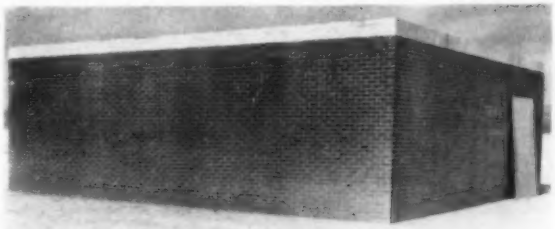
In the same test, two roof structures of reinforced clay tile beams were also not visibly damaged. In addition, six walls of brick and tile in two other structures were successful in developing wall arching resistance to blast pressure, the Federal Civil Defense Administration announced.

Following is the full text of the Federal Civil Defense Administration news release of July 10 announcing the test results:

"The Structural Clay Products Research Foundation had five structures under test to evaluate new reinforced brick and tile wall designs, and to study wall arching resistance to atomic blast pressures.

"A full size brick structure, 32 feet by 28 feet, which could serve as a school classroom survived atomic blast forces with no apparent damage inside or out. No cracks were noted in the walls, roof, or at any points. Large enough for a typical class of 30 pupils, the building could have provided a high degree of blast protection.

"The structure had 10 inch thick reinforced brick walls, a reinforced concrete flat roof and was windowless. The lack of windows is an important part of protecting building occupants from missiles flying through or from window openings.



Shown here is the windowless school classroom unit tested in Nevada. The photo shows the building as it appeared after the test blast.

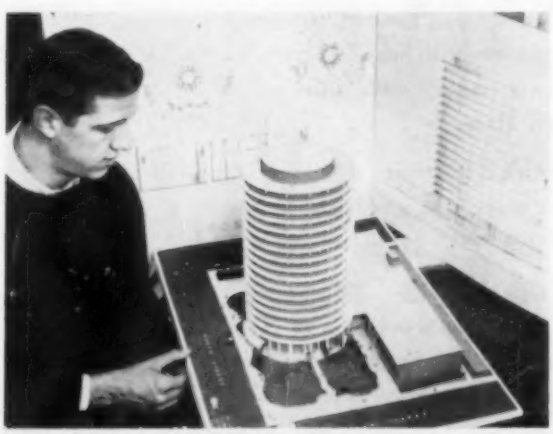
"There were no cross walls within the structure. The 32 foot wall length was oriented toward ground zero and was designed and located for a predicted load of about 1500 pouns per square foot. The other three walls and roof were designed for testing at pressures of about 750 pounds per square foot. Deflection gages revealed that the front wall deflected inward about ¼ inch, and the center of the roof ½ inch. However, all deflections were elastic and there appeared to be no permanent deflections.

"Of interest also is the fact that this type of reinforced brick structure is designed to resist the destructive forces of powerful tornadoes or earthquakes.

"Two roof structures of reinforced clay tile beams were not visibly damaged.

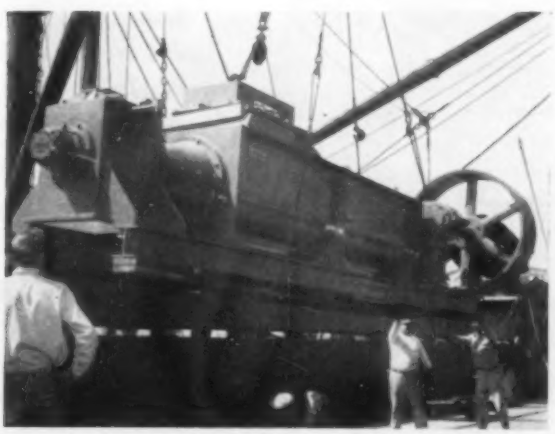
"Two wall test structures for three brick and tile walls each were successful in developing wall arching resistance to blast pressure. In each structure the two highest strength walls successfully withstood the blast. The lowest strength wall in each structure, designed to just fail at the design over-pressure, cracked as predicted and as desired to aid in the establishment of economical and sound safety factors for future engineering design purposes.

"These building designs were developed and the tests were sponsored by the Structural Clay Products Research Foundation in cooperation with the Federal Civil Defense Administration."



Office Building Wins Pa. Assoc. Prize

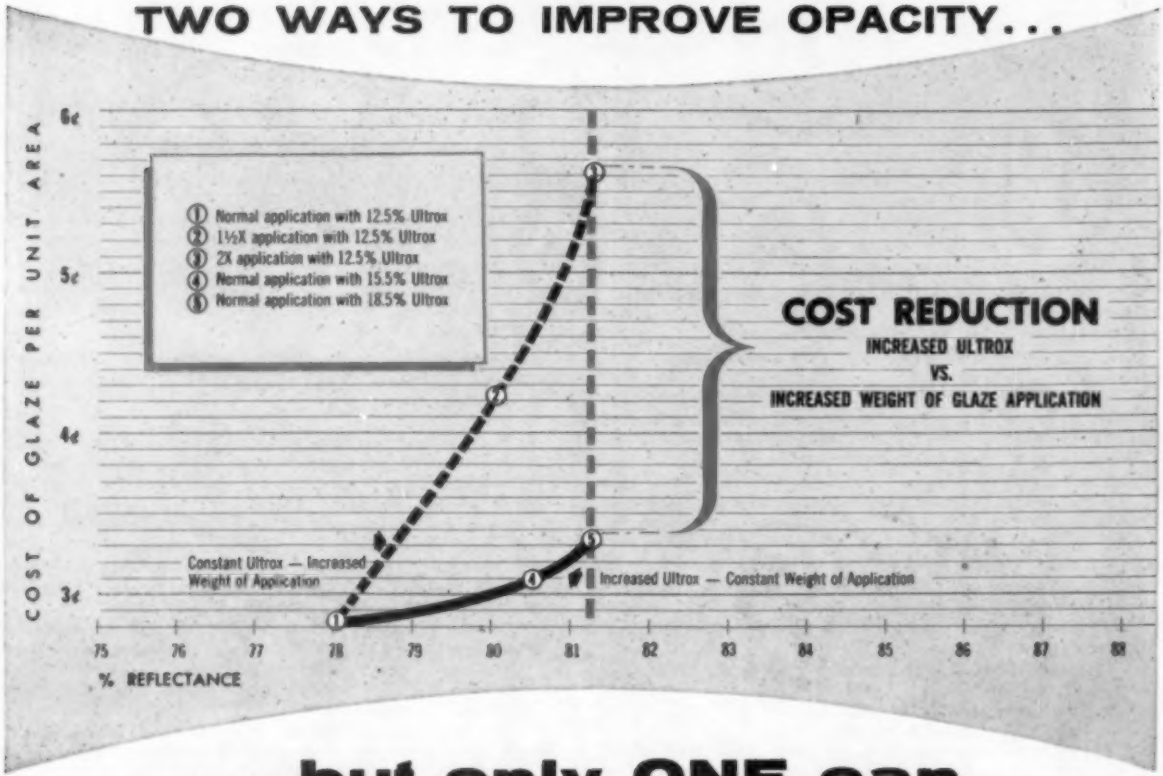
Roy S. Vollmer, student architect, is shown here with his model-design of an office building which recently won the first prize in a competition at Pennsylvania State University. The contest is sponsored by the Pennsylvania Brick & Clay Products Assoc. annually. Award totalling $250 are distributed to the students whose entries are judged the best.



Giant Brick Machine Comes by Ship

THE UNION BRICK CO. of San Diego, Calif., recently purchased a 26-ton brick-making machine from J. C. Steele & Sons. Shown above is a section of the machine being unloaded at a San Diego pier after its journey from Statesville, N. C., via the Panama Canal. The new equipment can produce 24,000 brick per hour. Union Brick Co. has been in business since 1904.

TWO WAYS TO IMPROVE OPACITY...



. . . but only ONE can REDUCE YOUR COSTS

Research in Metal & Thermit's ceramic laboratories has led to the development of hundreds of ceramic glaze formulations, many of which are given in Metal & Thermit's latest booklet "ULTROX Zirconium Opacifiers". Write for your copy.

The opacity of your ceramic glaze may be improved by (1) increasing the weight of glaze application, or (2) increasing the percentage of Ultrox 500W or standard Ultrox Zirconium Opacifier in your formulation. By using the second method you can reduce your costs and avoid the defects inherent with heavier glazes. The accompanying graph shows how costs are reduced with increased amounts of Ultrox in a typical commercial glaze.

Our technical service department will be glad to help on *your* formulation or ceramic glaze cost problems. Just write or call.

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ADDITIVES FOR BARIUM TITANATE DIELECTRICS
Crystalline Stannates of Bismuth, Lead, Calcium, Magnesium and others

NEWS OF THE INDUSTRY

F. K. Pence Dies

F. K. Pence, formerly head of the ceramic department at the University of Texas, died recently. Pence came to Texas in the late '30's and organized the ceramic department at the University of Texas, Austin.

Pence was born in 1883 and received his ceramic engineering degree from Ohio State in 1909. He was in charge of research for the American Encaustic Tile Co. of Zanesville for many years. He taught at Ohio State University for one year during his vast ceramic experience.

He served as president of the American Ceramic Society in 1921 and 1922.

PERSONALS

A 40-year and four 35-year veterans were recently honored by Robinson Clay Products Co. **Matthew M. Healey**, of the Boston branch, received the 40-year award; the four 35-year men were **Paul Spristerbach, E. H. Harris, H. C. Reymond,** and **John Kennedy**. Three 30-year men honored were **E. E. Garabrandt, Walter Starr,** and **Charles McPherson**; three 25-year people were **J. A. Runey, George LeMay,** and **Charlotte Wille.**

Carl Bach Jr. has joined Hydraulic Press Brick Co. as a sales representative in the Chicago area.

Among the many who attended the recent Structural Clay Products Symposium at Alfred University in New York were two brothers: at left, Leon Bassett, an associate professor of research at Alfred, and Robert Bassett, assistant vice president-production for Central Commercial Co. of Darlington, Pa. Bob holds a display board of the Darlington product.

Robert R. Bowman has been named Buffalo, N. Y., district sales manager for Harbison-Walker Refractories Co.

David E. Clemens, general sales manager of the Texas Vitrified Pipe Co., Mineral Wells, has been named assistant general manager, according to secretary-general manager **J. F. Bailey.**

Herman F. Lundberg has been elected board chairman for the Slidell (La.) Brick & Tile Co.

Gladding, McBean & Co. have moved their Spokane, Wash., office from the old Monroe street address to East 7621 Sprague. This latter address is the former site of offices of Washington Brick & Lime Co., recently purchased by Gladding, McBean.

D. M. Strickland, NCPMI president, has announced the appointment of **Charles E. Perry** as manager of the Government Relations Dept.; and of **Arthur M. Miller** as Assistant Office

Miller

Perry

Manager for the association's Washington headquarters. Perry was also named assistant to Vice President G. A. Robinson.

J. J. Jurgens, general superintendent of five factories of Robinson Clay Product Co., Akron, Ohio, has been named to the board of directors of the Dover, Ohio Chamber of Commerce. Jurgens has been with Robinson some 46 years.

Charles Flory has been appointed Pittsburgh district sales manager for the Refractories Div. of H. K. Porter Co., Inc. He has been with Porter's Laclede-Christy division since 1940. **Edward G. Platt** has been appointed to the newly created post of general works manager of the Refractories Div. of Porter. He was formerly works manager for Porter's McLain Fire Brick Div.

E. G. Counselman has been appointed manager, Industrial Sales, for H. K. Porter Co., with headquarters in New York. **William E. Haines** has been named Washington representative to replace Counselman.

W. H. Hanley, president of Hanley Co., Pittsburgh, has announced the appointment of **J. R. Nicholson** as manager of the company's Buffalo office.

Charles F. Greene, plant manager for Columbia Brick & Tile Co. and former manager of Burns Brick Co., is returning to the Burns firm at Macon, Ga.

George J. Bishop III, formerly with Guignard Brick Works at Columbia, S. C., is new plant manager for Columbia (S. C.) Brick & Tile Co. **James Parker,** formerly with Carolina Ceramics of Columbia, has joined Guignard as superintendent.

Obituaries

Florence M. Dickey—daughter of the founder of the former Kansas City (Mo.) Sewer Pipe Co. and sister of Walter S. Dickey, founder of W. S. Dickey Clay Products Co., died June 29.

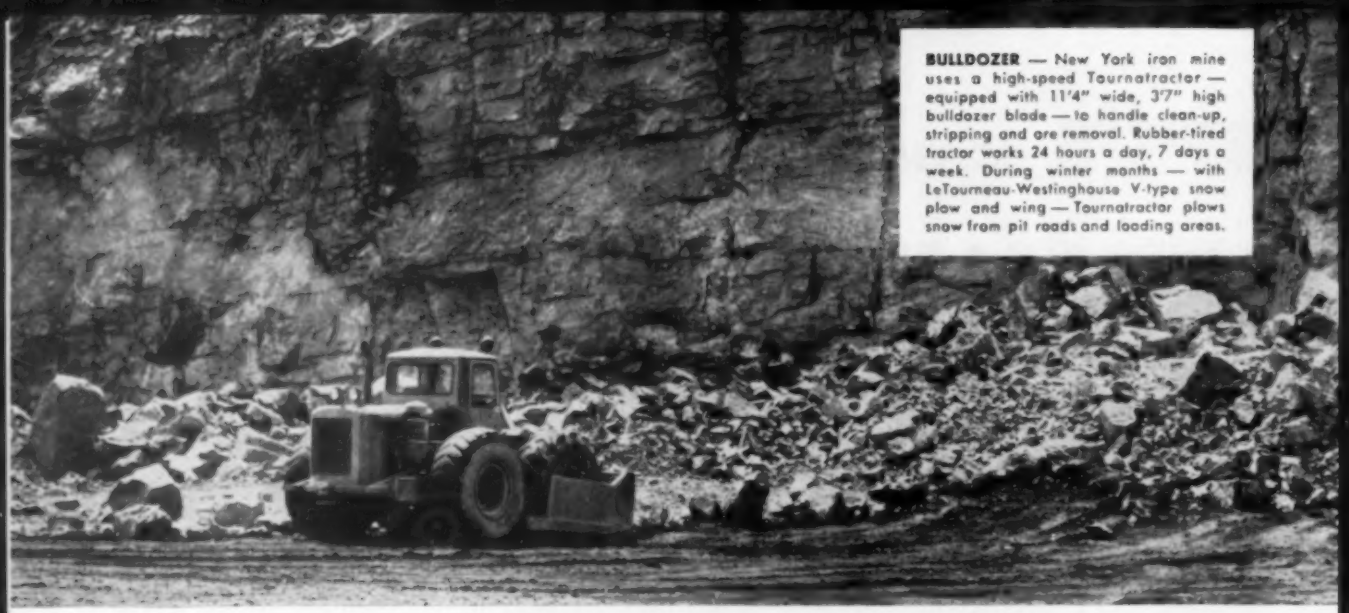
Harry C. Downer—82, retired secretary-treasurer of Malvern Clay Co., died July 20 after an extended illness.

Dale C. Chance—68, secretary of the Redfield (Iowa) Brick & Tile Co., died of a heart condition July 13. He had been ill for about three years.

Isaac J. Buck—88, owner and operator of the Acme Pressed Brick Co. at Tulsa, Okla., died July 7. He had been retired 15 years.

Charles H. Nock—84, founder of the fire brick company bearing his name and a large Cleveland refractory distributor, died July 3.

Mark Fuller—75, consulting engineer at Inland Fire Brick Co. of Cleveland, died July 3.



BULLDOZER — New York iron mine uses a high-speed Tournatractor — equipped with 11'4" wide, 3'7" high bulldozer blade — to handle clean-up, stripping and ore removal. Rubber-tired tractor works 24 hours a day, 7 days a week. During winter months — with LeTourneau-Westinghouse V-type snow plow and wing — Tournatractor plows snow from pit roads and loading areas.

Are you using 2 tractors where 1 would do?

SCRAPERS — At a southeastern open-pit phosphate mine, owners use 2 Tournatractor-drawn scraper teams for constructing levees around waste ponds. Optional LeTourneau-Westinghouse double-drum PCU efficiently operates any cable operated equipment.

TOWS EQUIPMENT — At a large midwest silica mine, Tournatractor also cuts downtime for air-compressors and other heavy equipment by moving them from one location to another *fast*. Tractor's big, low-pressure tires cross RR tracks, pavement, etc., without damage.

ANGLEDOZER® — Leading western copper mine uses Tournatractor — equipped with Angledozer blade — for clean-up of railroad tracks and loading area around widely-scattered shovels. 14'10" wide, 3'3½" high Angledozer blade can be angled 20° right or left.

SWITCHTRACTOR* — A southern uranium mine's Tournatractor—equipped with type "E" railroad coupler — spots ore cars in-between dozing chores. This versatile rubber-tired tractor can move 5 loaded or 18 empty cars up a 1 per cent grade.

This versatile rubber-tired LeTourneau-Westinghouse Tournatractor® can handle your scattered pit clean-up and road-maintenance jobs twice as fast as slower-moving crawlers. Here's why:

"Go-anywhere" mobility

High-speed Tournatractor *drives everywhere under its own power* — is never more than a few minutes away from its next assignment in your pit area. Rubber-tired tractor travels across pit floor, over railroad tracks, air-drill hoses, pavement, without damage.

Handles wide variety of jobs

With a L-W attachment to fit almost any work assignment, Tournatractor keeps busy productively all year-around. Use it for spotting rail cars . . . for fast push-loading or towing service . . . for heavy dozing to improve or construct haul-roads, detours or drainage. You'll find a single Tournatractor handles more work over a wider area — without excessive tractor moving expense — than 2 or more crawler-tractors! Why use 2 where 1 would do?

See Tournatractor in action

Why not let us arrange for a demonstration? See for yourself how LeTourneau-Westinghouse Tournatractor can lower costs and increase production at your pit. No obligation.

*Trademark CT-1495-M-1

LeTOURNEAU-WESTINGHOUSE COMPANY, PEORIA, ILLINOIS

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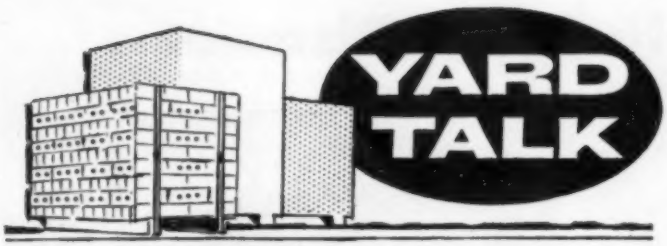
Where quality is a habit



According to a report we heard, Harbison-Walker refractories is using core drilling rigs in Morgan County, Ky., to test for flint clay deposits. H-W, which has leased some 5,000 acres in the area, has had two of the rigs at work since last summer. General Refractories Co. also is making core drilling tests in the same general area, with General also leasing some 5000 acres.

Word from D. M. Groves, secretary-treasurer of Shalite Corp. of Knoxville, Tenn., is that the company has added a 66,000 CFM blower using a Westinghouse 200 HP synchronous motor. Dust collecting set-up, costing $15,000 all told, included of course the collector, stack and other tubing, with work being done by W. J. Savage Co. of Knoxville. Shalite will be host to the August meeting of the ECSA, as noted elsewhere in the news.

Misceramics Tile Co. of Cleveland, Miss., has plans to put in two Allied kilns, reports F. P. Henderson, an Allied district engineer. Also planned to go with the kilns is a new plant including necessary equipment for wall and floor tile manufacturing with work started on June 1, according to Henderson. Completion should come about November 1. Company president is W. L. McMullen, with other officers including vice president R. E. Hormberg, who is also manager; treasurer, Chester Clark; secretary, Earl Graves, and superintendent, Bob Trinklien.

R. W. Pafford, president of Texas' Acme Brick Co. has been appointed to Texas Engineering Foundation.

Very nice write-up on Lawrence Refractories Clay Co. appeared in an Ironton, Ohio paper recently, sent to us by manager E. W. Sharp of the Pedro, Ohio plant. Ford Motor Co. plants, Sharp reports, use thousands of tons of clay from the plant to seal firebrick linings and such. Lawrence was organized two years ago, having been idle for the previous years. Additional storage sheds were built recently; at present Lawrence turns out about 1,200 tons of clay each month.

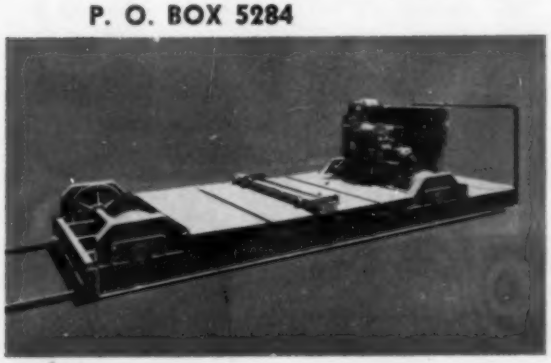
As part of the resultant events of the near-kidnap of F. George Robinson of Robinson B&T in Denver, President Robinson was the subject of a recent "Big Story" television program in May. The program told the story of the kidnap-murder plan, first reported in BCR in February. Honored on the program was Al Nakulla, Denver newspaperman who helped thwart the kidnappers.

In a switch from the usual practice, Hugo Fillipi, Illinois Brick vice president, gave a dinner to some of his employees when he retired recently. More than 50 employees were present at the party. Fillipi retired after 25 years with the Chicago firm.

Brief notes: J. H. Huber Corp. at Graniteville, So. C., is building what they believe to be the "world's largest clay shed"; it's 300' long, 100' wide and 46' high. . . . O. J. Whittemore was recently written-up in a Des Moines, Iowa paper, with stress in the story put on his salt glaze process, his career and family activities. . . . Robinson Brick & Tile of Denver is putting 120,000 units of structural glazed tile in two new office buildings in that city; about 100,000 tile will be used in Denver's longest stair well, part of a 28-story building. . . . Truck driver Charley Boughter of Pearson Brick Co., New Castle, Pa., got newspaper mention not long ago. He's figured out that in 7 years work, he lifted about 14 million brick, for 73.5 million pounds, enough for 1,225 five-room houses; if laid end to end, the brick would cover 1,800 miles; he's reported to like the job a lot. . . . An odd damage suit was won by Central Commercial Co. of Chicago, who are operators of a brick plant at Darlington, Pa. A truck broke a utility pole, cutting off power for the brick plant and starting a fire; Central settled out of court for $75,000 with the judge saying it was an unusual case that might have gone to the Supreme Court. . . . Ray Smith of Kansas Brick & Tile of Hoisington was elected vice president of Western Kansas Mfrs. Inc. . . . Frank M. Rinehart, president of Delta Brick & Tile of Indianola, Miss., was elected a director of the Mississippi Economic Council. . . . Levi C. McCrady, of Pittsburgh's McCrady Refractories, reports that they shipped 27 tons of fire clay to Japan for steel plant use; freight charges were five times the value of the clay. . . . Donald G. Davis and Ray H. Coots were two of 11 children of Harbison-Walker Refractories employees who've been awarded H-W college scholarships by the Harbison-Walker Foundation; both are from Pittsburgh. . . . Anne Lumpkin was the 1957 winner of the A. P. Green $3,000 scholarship award. . . . The St. Mary's, Pa., plant of North American Refractories ceased operation on July 1—part of a plan to stress production at larger plants of the firm by closing some of the smaller plants.

ENGINEERING ASSOCIATES, INC.

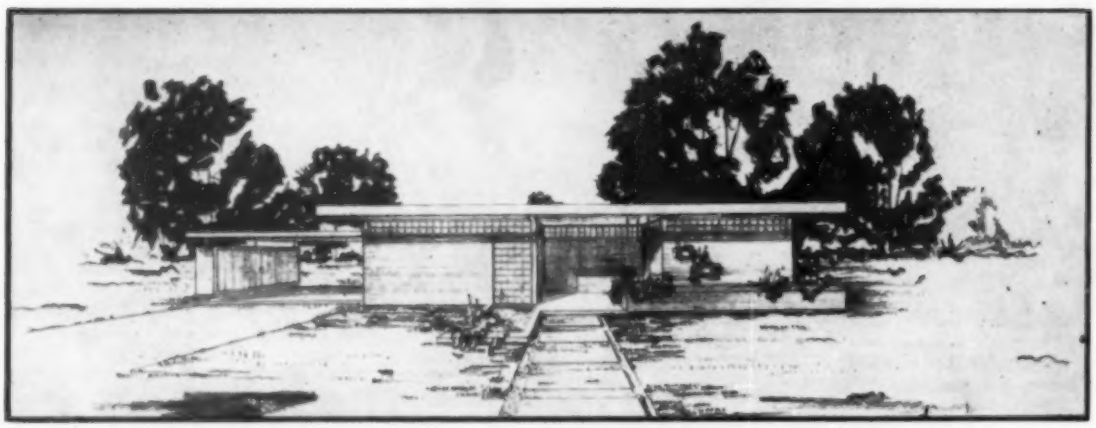
P. O. BOX 5284 **ASHEVILLE, NORTH CAROLINA**



The Hydraulic Transfer Car is the only car on the market with a truly variable speed. Starts and stops are smooth regardless of operator or severe service. Hydraulic drive allows use of such auxiliary equipment as pusher cylinder on car to pull on and push off kiln cars, and even charge dryers. Sliding position locks not required because of hydraulic lock when car is stopped.

Represented By: **Forrest A. Paschal**
Box 289, Siler City, N. C.

SCR Survival House
Can Protect Public From Disaster



New blast-resistant design by SCPRF offers protection against earthquake, tornado, hurricane . . . at competitive cost with contemporary design and tested construction methods.

Death, destruction, property loss—caused by tornado, earthquake, hurricane or atomic bomb blast—have been a major part of the news pages in recent days.

The tornadoes in Missouri and Kansas, the earthquake in Mexico, the hurricane that swept over the Gulf Coast have all resulted in enormous loss in life, property and possessions. The immense power of the atomic bomb has been demonstrated over and over since 1945. It hardly seems necessary to go into a full-length description of the destruction that these natural or man-made forces can cause.

There is an answer now, to the question of how can people be protected during such calamities. There is a way to protect families and entire towns when a tornado sweeps across a state, a hurricane roars over hundreds of miles or even in the awful event of an atomic-bomb war.

The answer, about as complete a one as we can expect, is in the SCR Survival House, designed by the men at the Structural Clay Products Research Foundation.

Survival House

Basing their work on knowledge gained during their Coal City tests, and Nevada A-bomb tests, SCPRF has developed a house that's handsome, compares in costs with current construction prices, and that affords real protection both in actual construction methods and in the design of living.

Some 6 different floor plans with varying exteriors are available to the buyer. One of the basic ideas in the plan is to incorporate the primary living areas of the house in a "core" of protection. This core may cover the bedrooms, the living room, the central area including kitchen or some combination of these.

Protection at Night

By means of using a core, people asleep in the night who don't hear disaster warnings over radio or TV, will be sleeping in the protection of the core.

During the day when warnings are more likely to be heard, the people will at no time in the house be more than just a few steps from protection.

This construction design could give maximum protection against disasters, a fact that has been proved in Nevada where similar construction methods stood up well against the A-bomb.

Construction Problems?

Construction in all areas of the country is possible, because the house uses methods thoroughly worked out by the SCPRF people, including such known and tested equipment as SCR brick, RBM and other lab developments. Construction costs, considering the great protection built in, are well in line with costs of comparable construction, and shouldn't cost more than one to two dollars per sq. ft. extra.

One objection many people have to such protection is their mental image of a fortress, a heavy block-house, with this impression probably based on the bomb shelter idea.

House Good Looking

These ideas should be dispelled with a look at the houses designed by SCPRF. All are fine looking contemporary design, with design possibilities virtually unlimited. Probably the only difference easily visible is the use of glass block rather than windows. The idea here is to give more protection from the hazard of flying glass fragments. The glass block should allow ample light, but if the potential buyer should consider this a drawback, it's entirely possible to use windows in sections of the SCR Survival House.

Windows could be used but kept away from the protective core, or blast-proven shutters could be used to protect quite large picture windows.

This idea in construction needn't by any means be reserved only for residential construction. Entire schools

could be built using this Survival concept. Shopping centers could be built entirely by this method, or perhaps one in three of the units could. Civic buildings could adapt this protective construction.

By use of any or all of the above, any people in older houses or away from their Survival home could use such centrally located buildings as protection. Communities should insist that such a form of protection be included in future planning so that all people of the town could have adequate protection.

Weather Unpredictable

No one as yet has devised an accurate method of predicting where a tornado will hit; earthquakes hit all sections of the country despite the popular conception that they're exclusive to California . . . and of course, giant areas could be affected by an atomic bomb in event of war.

So, it doesn't seem possible that anyone could argue against the continuing need for protection of our people and communities.

We've got just what the public needs in the SCR Survival House. Good protection, good looks, and a reasonable cost are features that can easily be proved to anyone.

What Will Happen

Unfortunately, it's possible that the Survival House will never leave the drawing board. This can happen if the public never learns of the advantages—if our industry doesn't do the service to the public of making this house known.

Is there any interest in this type of house? A good gauge of this lies in the major display given the house by the Chicago *Daily News* in a recent issue. The *Daily News* is respected both in Chicago and nationally as being a lively paper, well alert to what their readers are interested in and what will be of maximum interest to the most people.

This paper felt the house to be of enough interest to send their real estate editor and other people out to the Geneva SCPRF lab for a considerable time to get the full story. The story, when it appeared, got excellent display, featuring the house both in words and pictures.

This certainly can be taken as a sign of great interest in achieving protection for families and towns.

What Do We Do?

Now, what should the clay products industry do about this? We have one of the biggest opportunities in a long time to both do public service and to help our industry.

We should publicize this house, what it can do and its many advantages, as fully as we are capable of doing. It should be talked about, written about, and shown. Articles on this house should appear in farm magazines, to tell farmers about tornado protection; in home magazines such as *Better Homes & Gardens*, to tell the home-owning public; in magazines aimed at civic officials and school boards; all contractors and builders should know of this house.

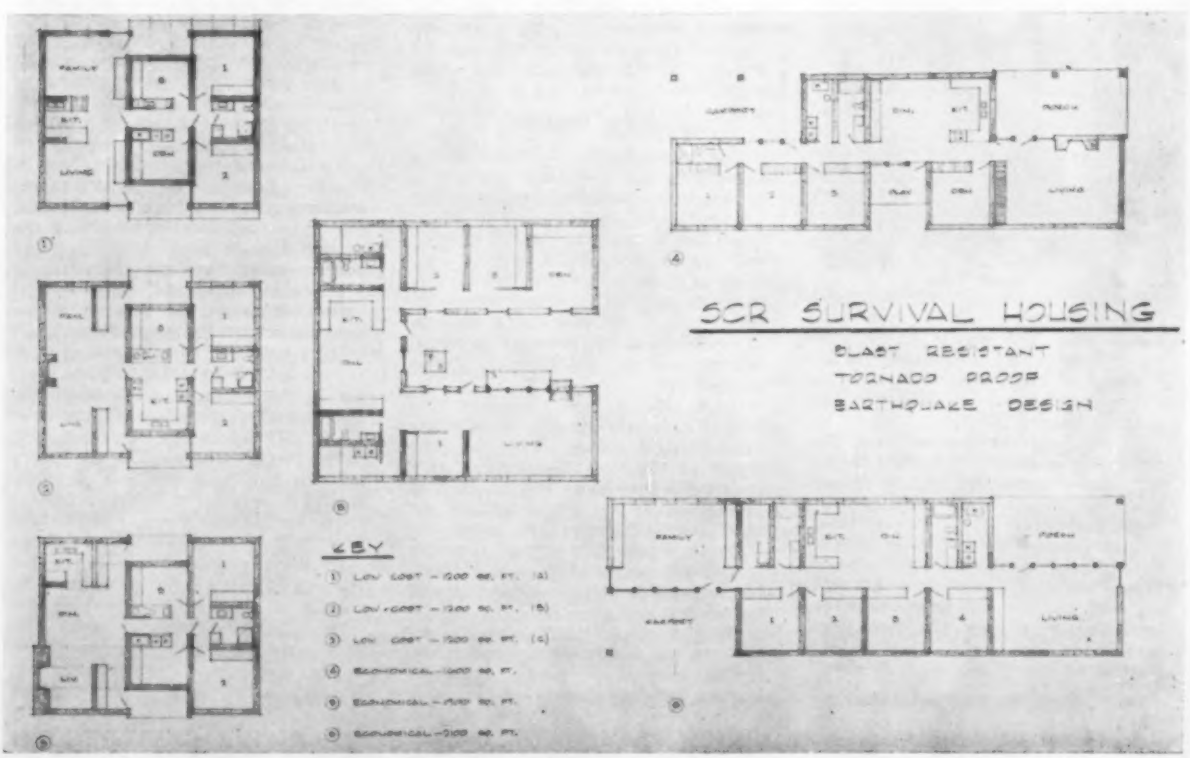
Every clay products manufacturer should know, his salesmen and dealers should have the full story, and all the present and potential customers for this house should know.

Promotion Vital

SCPRF can't, and probably shouldn't, have to do all this alone; it's not really their job. The designs have been fully developed for construction methods; appearance and floor design possibilities are wide open to apply to present tastes and desires.

The job needs to be started right now, while the Mexican earthquake, the Kansas tornado, the Louisiana hurricane, and the A-bomb test results are all fresh in the public mind. Walking in, a year or two from now, with the SCR Survival House plans will do little good compared to what we can do today, this week, this month.

Will we do it? More than anyone, that's up to the reader of this magazine. We can't answer this question, but you can.



Furnace, Bomb Test Featured at SCPRF

Members hear reports also on new panel house, packaging, efflorescence, mortar research, Re-nu-veneer in two-day meeting.

A report on the highly successful results at the recent atom bomb tests and the test-firing of a lightweight aggregate furnace, two events that will rank as historic in the structural clay products industry, were outstanding events of the two-day SCPRF annual membership meeting held July 17-18 at Geneva, Ill.

More than 150 SCPRF members, regional representatives and others attended with particularly good attendance by younger men in the industry and plant operating personnel, a fact noted and commented on with pleasure by SCPRF Chairman Roy Shipley.

Other very interesting developments included announcement of the beginning of construction of a brick-panel house in Geneva; a merchandising kit to help applicators sell "SCR re-nu-veneer"*; the sale of the automatic brick packaging machine to an Iowa plant; and reports on mortar, thermal research, fundamental research, etc.

A-Bomb Test

In speaking of the "Plumbbob" atomic blast test results, SCPRF Director Robert Taylor stressed the importance of these results to both the structural clay products industry and to the American public.

In the test, the Federal Civil Defense Administration reported that a full size reinforced brick school classroom structure successfully withstood the effect of the atomic blast. Taylor pointed to the value of this type of construction not only in event of war but also to protect people during such catastrophes as earthquakes, tornadoes, hurricanes. (Ed. note: Full text of the release was given in July, page 37.)

* Reg. U. S. Pat. Off., Pat. Pend., SCPRF

He believes that the clay industry should take full advantage of the opportunity to do a great public service by making the safety of such construction known to the public. And he felt it should be done immediately before the impact and timeliness of the results are gone.

For an example of how such construction could be used in homes, Taylor discussed how a "core" of reinforced brick or tile could be built in a house encompassing the main living and sleeping areas. Thus, in case of a tornado coming at night or evening when the occupants might not be aware of tornado warnings, they would already be in a protected area.

Lack of Windows

One of the interesting effects of the blast tests was the value of the lack of windows. Tests have shown that window glass, when fragmentized by blast, can do a great deal of damage and can cause death. A lack of windows in a school or house, or a lack in those sections designed as a survival "core," isn't much of a problem in these days of effective artificial lighting and air conditioning, Taylor pointed out.

C. B. Monk, Jr., manager of SCPRF's engineering and architectural research division, gave the main report on the tests. He stated that a reasonable cost house can be built to protect people in 75% to 90% of the blast area. Of course, the same construction would offer protection during earthquakes or weather-caused disaster conditions, such as tornadoes and hurricanes.

Monk discussed the construction details of the test buildings and walls, giving particular credit to Robert Harrington, manager, Clay Brick & Tile Association of Northern California. Harrington supervised construction over the three-month period involved, using his experience as an RBM expert to aid SCPRF.

It was also noted that Monk has designed a house, based on information learned from the earlier Coal City tests and the recent FCDA test, that would cost less than 15% more than conventional construction yet offer much real protection.

In addition to the school room, SCPRF built a set of three 8-inch and three 12-inch clay masonry walls, that were designed to "arch" against the blast. Clay tile roof beams were also tested. The front wall of the schoolroom withstood a dynamic peak pressure of over 1500 psf with recoverable deflection of ¼ inch. Peak loads of over 1000 psf on the 8-inch walls and of over 2000 psf on the 12-inch walls resulted in one failure in each test, but verifying the arching theory by which the walls were designed. The walls left standing exhibited acceptable deflection for human survival. Most remarkable behavior was exhibited by the clay tile beams located near both the 8 and 12-inch wall positions. The beams showed no signs of failure or permanent deflections; their elastic movement during the blast were far less than theoretically predicted.

Near noon on the second day, Deputy Director Paul Johnson gave a report to the members on the new lightweight clay furnace recently built at the SCPRF laboratory.

The furnace discussed at last year's meeting has been modified considerably. The original was built at Selas Corp. and tested there, with an entirely new model then built at Geneva.

In his discussion, Johnson stated the aim of SCPRF in the furnace development was to find a way to get durable, load bearing clay units with good appearance and light weight.

The development process involved finding lightweight granules that

could be added to present raw clay but one that would not involve high processing costs to the manufacturer, or obsolescence of current plants.

Johnson has found that inherent savings in processing will keep costs reasonably low. For one thing, for an equal amount of clay mined, the lightweight material has greater volume for its weight, giving in effect more material for the same amount of raw clay. Because of the nature of the clay granules, faster burning and drying schedules are possible, Johnson noted.

In speaking of the furnace itself, Johnson said that SCPRF has gone to radiant heating to get best results in bloating. A muffle is used to prevent agglomeration and to get a non-turbulent atmosphere.

To condense greatly the furnace operation for the benefit of those who have not yet seen it, the raw clay is dropped in through the top, passes through a preheat and a firing zone, and drops out of the bottom as bloated, fired granules.

The furnace itself is entirely vertical, somewhat over three stories high.

The raw granules themselves have been changed from the flat discs used last year to tiny, cylindrical units more easily produced. Johnson stated that SCPRF learned more about granules in "free fall" through the furnace, and has concluded that they should be identically shaped to fall at the same rate to avoid particle collision whenever possible.

Several methods of manufacturing the particles have been developed, including forcing the raw clay through dies by centrifugal force in what has been nicknamed a "slinger."

Pre-Heat Zone

In discussing the operation of the furnace, Johnson said that the raw clay particles are fed through a material valve in the top which is controlled by another material valve below the pre-heat section to give even feed. Temperature in the pre-heat section runs about 1400°F. When the material goes into the high-heat section, temperature there runs about 2750-2900° depending on the individual clay and its composition. Furnace capacity is about 1,000 lbs. per hour, or about 1⅔ cu. yds. per hour.

No Grinding Problem

In preparing the clay initially, Johnson has found no great problems. In fact, it is possible that fine clay can be scalped from normal grinding to meet a good part of the need. Johnson pointed out that the clay ground for the furnace will be only a small part of the total grinding operation, thereby avoiding excessive new equipment costs. Extrusion has been found to be no problem either, with Johnson reporting use of about 20% water in clay preparation.

Preceding the actual demonstration of the furnace, Johnson said that SCPRF had not as yet dropped material through at bloating temperature. The new furnace had been lit only a week before the meeting. In bringing it up to operating temperature, only small amounts of material had been tried primarily to check valve operations.

Other points noted were that operating noise of the unit is very low. Gas consumption runs about 1600-1650 cu. ft. per hour with use of 1000 BTU gas, operating on a 10-1 air ratio and average firing temperatures of about 2800-2900°F.

Demonstration

The members moved to the outside for the actual demonstration of the furnace. Material was dropped through with samples then passed out for inspection by the members.

Johnson pointed out that the test was not intended as a full-scale demonstration of the unit on a production basis, that it was intended only to give the members a graphic idea of the unit's operation. Some adjustment of the valve system will be necessary before full-scale production can be attempted. Editorially, we would like to mention that very great interest was shown by the members with samples still being carried and discussed during the following lunch period.

Other Reports

In their opening comments on the first morning, Taylor and Chairman Shipley reported that research developments are, in many cases, now at the stage where manufacturers can take things in hand and put the ideas in production; that actual research is drawing to a close on many aspects of previous developments.

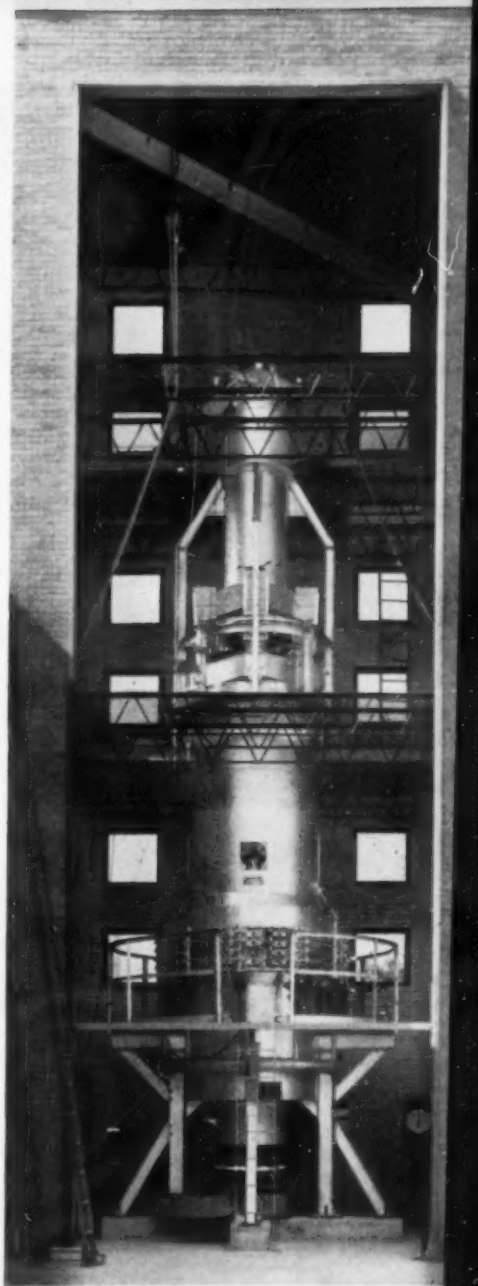
Taylor welcomed two new members, Tri-State Brick & Tile of Jackson, Miss., and Washington Brick Co., Washington, D. C., represented at the meeting by R. H. Robinson and John Harding, respectively.

Taylor then noted that the objective of SCPRF research is still for end use results with the intention of lowering in-the-wall costs. This objective is being sought in four ways: improved unit design, improved wall design, improved site techniques, and new products.

Panel House

Director Taylor told the members that a new house now under construction in Geneva will use the type of masonry panels first introduced at last summer's meeting. Taylor believes that installation costs will be about 30¢ per square foot, with some $1,800 of clay products being used in the house. Original plans by the owner included only about a quarter as much in clay products as brick veneer.

Cost of the house should run about $10-$11 per sq. ft., considerably less than comparable Chicago area costs.



LIGHT WEIGHT aggregate furnace above was demonstrated to SCPRF members at meeting. To give an idea of scale, the furnace building is a little over two and a half stories high.

With an area of about 1,500 sq. ft. plus a similar size basement and a two-car garage and porch, the house will have a heat pump installation; will use "SCR brick"* on top of the footings as a foundation wall; will be a house costing about $25,000 that will compare with present $35,000 houses of the area.

* Reg. U. S. Pat. Off., Pat. Pend., SCPRF

(Continued on following page)

Talking over the mock-up panel is this group, including Dean Ramey, Bill Coates, Bob Taylor and others. Model drew considerable attention and comment.

SCPRF Continued

James Young, ceramic research supervisor, reported results of his continuing studies of moisture expansion and mortars. Concerning moisture expansion, Young believes that this problem is still poorly defined. No one now knows just how important the problem is, or enough about its causes. Plaster cracking and similar damage can result from moisture expansion, but studies have not advanced far enough as yet to tell just how much expansion will cause damage, what the necessary conditions and circumstances would be; or what might be done to prevent the problems involved.

Young is sure that means can be found to control potential moisture expansion within necessary limits.

Mortar Research

In reporting on research done in mortars, based on last year's report on this subject, Young noted that work is complete in developing a quick-set mortar for use in panel assemblies; that a dirt-resistant mortar has been developed; that results are nearly complete in developing a mortar for use in radio-isotope laboratories.

Vanadium Efflorescence Research

In research done on this form of efflorescence, Young has come to two conclusions: brick must be fired above a certain minimum temperature, and there must also be acid present for development of the efflorescence.

Vanadium in brick clays, which is not soluble in raw clay, can be made soluble during firing. The vanadium becomes soluble at about 1500°F. with a maximum solubility rate at about 1750 to 1800° and then a rapidly falling rate till a safe level is obtained at about 1900 to 2000°. So, Young noted, firing temperatures had great effect on this efflorescence.

Dr. Wayne Brownell, of Alfred University, spoke on the fundamental research being done at the New York school. Briefly, a good part of the work is investigating the physical and chemical structure of fired clay units; the crystalline structure, what glasses are present, the effect of the various parts and constituents on others; whether brick is being fired to an equilibrium state, and whether this is good or bad. The point made by Brownell about fundamental research is that too often we do not have enough really basic knowledge about our own products, and he cited the need for research into the real fundamentals of our materials, products and their chemical component parts.

Panels

Following this, Monk reported developments in the field of masonry panels. He gave additional information about the panel house being erected to amplify Taylor's remarks earlier in the day.

Monk said that the new units for panel fabrication are now being especially extruded and designed to provide a central point of panel attachment. A Unistrut-like piece placed in the back of the panel allows attachment almost anywhere. This and other ideas eliminates the need for pre-engineering of attachments for each job, Monk said.

A steel company in Chicago is doing development work to create a steel section that will act as a combination flashing and structural support for panels joined between floors of a multi-story building. Work is also being done in cooperation with a major rubber and plastics company in designing new types of seals, gaskets and flashing. Polyvinylchlorides are being worked with to make attachments more waterproof, to get a slip-in joint material that can be pushed in place, or which could be preattached to the panel during manufacture.

Another development in the panels was a better casting technique, which does away with the previously necessary pallets. Now being used is a vacuum lift which raises the entire panel by suction from the casting form. Monk also noted that an improved grout has been attained. Aside from these developments, primary work in the panels' fabrication process has been miscellaneous refinements and improvements here and there. Monk feels sure that the panel assembly is now workable for plant production with cost for the equipment involved at a reasonable figure.

Much more strength than comparative competitive panels was found in the new panels, Monk reports, with vertical load-bearing capacity of up to 20,000 lbs. per panel allowing use of the panels as load-bearing elements in a building several stories high.

Thermal Research

The second morning opened with Monk again reporting, this time on work done in thermal research. Results very favorable to masonry were noted, with Monk believing that masonry

(Continued on page 64)

SCPRF chairman Shipley with W. H. Vaughan of Cherokee.

L. S. Meyer and Carl Bach.

John Goodrige of Illinois Brick with Doug Whitlock.

Check your AIM*. . . Logan Clay Products does . . .

Steel Strapped pipe insures product protection

LOGAN CLAY PRODUCTS, Logan, Ohio, quantity producer of sewer pipe, sought a way to package their product for safe shipment and economical handling. (Idea No. S3-28)

Acme Idea Man, Ted Starr cooperated with Logan Clay Products in the development of their pipe pack.

After checking their Acme Idea Man, they developed a method of stacking and steel strapping skids of sewer pipe, plain or jointed, which practically eliminates pipe breakage and joint damage. This new method reduces manual handling operations by 50% between kiln and user and permits loading and unloading eight times faster.

***Check your Acme Idea Man.** He is trained to help with all aspects of product packaging and protection. His field-tested suggestions are certain to be helpful. Call him at the nearest Acme Steel office or write: Dept. BES-87, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois. In Canada, Acme Steel Co. of Canada, Ltd., 743 Warden Ave., Toronto 13, Ontario

ACME STEEL **STEEL STRAPPING**

How Columbia B&T Combines Clays for Colors

First in a series: The raw materials, process and equipment being used to obtain various colors in face brick from native clays and shales at Columbia Brick & Tile in Missouri.

The Columbia Brick and Tile Company plant was founded in the early nineteen hundreds, on a hundred acre tract at the eastern edge of Columbia, Missouri. The entire area is underlaid by a wide variety of fire clays, shales and coals.

In the early days, the plastic shales were used to manufacture paving brick and the coal was mined adjacent to this to burn the brick.

Today, however, natural gas from the Panhandle Eastern Pipeline Company is used as a fuel to burn the brick, and the company produces a wide variety of colors and textures from the natural clays and shales occurring on the property.

Variety of Colors

The present owners of the plant have found that an almost unlimited variety of colors can be produced by combinations of the shales, fire clays and shales, and fire clays alone. This fact is attested to by their many orders for brick to match buildings in many areas throughout the state, as well as surrounding states.

One of the shales which occurs in the Lagonda formation is highly siliceous and bluish grey in color. It lacks sufficient plasticity to make a good, dense building brick when used alone.

About one half of this formation occurring on some thirty-five acres of the property has had the coal mined from under it, which has allowed the surface to break, permitting the formation to weather to its entire depth, a distance of some twelve to twenty feet in thickness.

The iron and other impurities occurring in the shale has become oxidized to a yellowish-brown color and the plasticity of this shale has been greatly enhanced, due to the weathering action. This weathered shale furnishes an entirely different set of physical properties, as well as color and firing behavior from its original status.

About William Powell . . .

The author of this series of articles, William R. Powell, is vice president of Columbia (Mo.) Brick & Tile Co.

Among degrees he holds are a B.S. in Ceramic Engineering, another B.S. in Metallurgical Engineering; he is a member of Tau Beta Pi, and of Keramos.

In his professional career, Powell worked for five years as clay inspector, mining and assistant to research director at A. P. Green Fire Brick Co.; two years at Pyro Clay Products Co. as superintendent; more than three years as plant manager at Big Savage Refractories; twelve years as general plant superintendent for Mexico Refractories Co.; seven years as co-owner, and in operation and management at Columbia. In addition, Powell maintains a private laboratory, doing consulting and testing of clays and minerals, partly as his hobby of collecting minerals and fossils.

Powell and daughter.

Powell says of this series of three articles, "I will attempt, in this series of articles on "Development of Colors from Native Missouri Clays" to show how this company, formerly beset by serious scumming problems , excessive product size variation, irregular and erratic iron spots and iron stains and poor general colors, have transformed these elements of distaste and sources of trouble, into articles of beauty by the application of scientific knowledge."

Needless to say, despite Powell's primary use of Missouri clays, what he has learned about use of various clays and combinations should prove of real value to many of our readers.

FIRST
IN
A
SERIES

By
William R. Powell
Vice President
Columbia Brick & Tile Co.

A third shale is used, which occurs above the blue-grey shale. This is the Blackwater Creek shale. It has much the appearance of a pipe clay, being very fine grained and carries an extremely high percentage of colloidal red iron oxide. It is very plastic, working much like a good ball clay and is used by local art ware classes for throwing and molding.

Very Plastic Clay

Cheltenham fire clays occur on all of the company's property. It occurs near the surface on fifty-five to sixty acres and appears to consist principally of the two upper strata of the Cheltenham formation.

This deposit which contains a few million tons, occurs on the western edge of the vast East Central Missouri fire clay district. The upper strata Cheltenham in this outlying area has a P.C.E. of cone 26 to 28, while the middle or second strata has a P.C.E. of cone 28 to 32.

In this upper strata plastic fire clay, where there is no covering or cap rock, the iron is oxidized to the yellow oxides and sulphates, and the lime is present as crystallized gypsum. Under properly controlled firing conditions many shades of pink, tan, yellow and brown can be produced.

Burns to Near-White

The second strata of Cheltenham is harder and is a semi-plastic fire clay. Here the iron, when present, is in the form of pyrite (iron sulphide). The clay itself burns to a near white, except in localized areas in the strata where pyrite is present.

When colors began to play such an important part in the building industry, it became apparent that these various shales and clays could be utilized to produce almost any color of the spectrum in soft, pastel shades.

The face brick are manufactured by the stiff mud process. Colors vary from grey to very light buff, pink, tans, yellows, reds, browns and black. In the flashed brick, there are many dark shades of green, blue, yellow and purple. These brick are made in matt or velour texture, rugg or vertical score, smooth face and sand face. They are made in standard eight inch normans and romans, both side cut and broken face.

Nine inch fire brick and nine inch fire brick series are made by the dry press process on a Chisholm, Boyd, White dry press from the better grades of semi-plastic fire clay, occuring in the middle strata Cheltenham formation.

Remodeling Program

Bearing in mind this variety of clays and shales, the company started a remodeling program to take advantage of these natural clays and shales, to supply the demand for colored face brick.

Two gas powered shovels were purchased and dump trucks used to haul the various clays. Stripping of the pits was extended from six months to one year in advance of the mining operations, to allow more extensive working faces as well as to keep working faces clean. This extension of the working faces permits better selection of the individual materials for specific colors and physical characteristics.

Heated Screen

Next, a heated vibrating screen was installed, to permit finer grinding, its size increased to accommodate a greater capacity. Also, three new steel storage bins, equipped with adjustable disc feeders and belt conveyors were installed to permit flexibility of mixing combinations of the various clays.

Installed next was a Fate-Root-Heath Jr. combination stiff mud de-airing brick machine with 18 brick rotary Steele cutter, having extra reels for making structural tile, facing tile, romans and normans.

At the off-bearing belt, all brick are set in the lift truck packages, 32 inches wide x 24 inches deep and eight courses high. Two packages of 250 brick each, are set

Shown here is the setting method developed at Columbia Brick & Tile.

on a car. Considerable experimentation was done on the setting of this package to arrive at a stable package which will dry easily and yet remain tight and straight at the end of the drier tunnels. They had to be of such height and size to permit loading into kilns in proper units so as not to lose capacity in the kilns.

Alterations to the tunnel driers included installation of additional exhaust fans to accomplish the removal of some 15,000 additional cubic feet of moisture laden air.

The lift truck packages are staggered off drier car center, to break up the straight line flow of air through the car tunnels, and thus give turbulence which causes the air to sweep through the setting and pick up the maximum amount of moisture. Any stiff mud drier should have flexibility of control, to allow for atmospheric changes of temperature and humidity.

Many well made brick are injured for color and physical properties in the initial stages and the follow up process of drying.

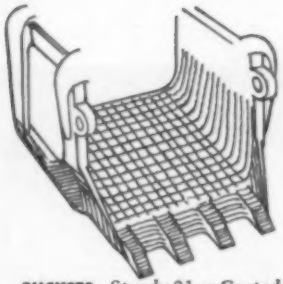
Twelve Tunnel Driers

The brick are dried in twelve gas fired tunnel driers, from thirty six to forty hours to 250 degrees Fahrenheit. As the brick are removed from the drier tunnels, they are picked up by mechanical type Bickerstaff lift forks on the Hyster lift trucks and set in down draft kilns, four packages high.

The kilns are fired with natural gas for a period of four to six days and cooled in two to three days. The kilns are thus maintained on a ten to eleven day cycle. High pressure (16 oz.) fans have been installed on each kiln stack to speed up the initial removal of water, carbon and a portion of the sulpher. These fans are left on for approximately fifty hours, from the start of the firing, then are cut off and the kilns are fired by natural draft throughout the remainder of the firing process.

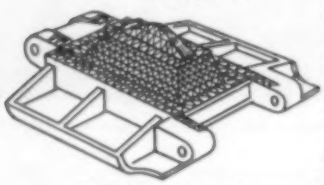
Concrete runways have been built to each kiln, and kiln bottoms built up solid to stabilize it against the extra weight of the lift truck operations. Kiln flues were shortened to approximately eight feet of center well to prevent short circuiting of heat and force heat to center of setting.

(Continued on page 73)

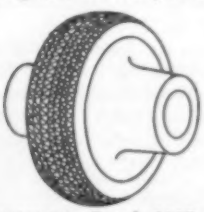


BUCKETS: *Stoody 21 or Coated Tube Stoodite. By Semi-Automatic—Stoody 121 or Stoody 100.*

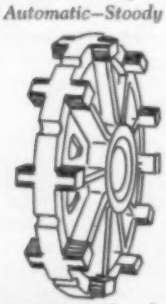
TEETH: *Stoody 21 or Borium. By Semi-Automatic—Stoody 121 or Stoody 130.*



PADS: *Stoody 1027. By Semi-Automatic—Stoody Manganese or Stoody 104.*



ROLLERS: *Stoody 1027. By Automatic—Stoody 105.*



DRIVE TUMBLERS: *Stoody 1027.*

IDLER WHEELS: *Stoody 1027. By Automatic—Stoody 105.*

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Schools—Where To Now?

Architect Frank Bull asks if mailmen aren't doing too much of the sales job for brick; discusses school construction, and brick vs. block.

The talk presented on these pages was given at the June meeting of the Southern Brick & Tile Assoc. by Frank Bull, noted architect, at Sea Island, Ga. in June. The report on the full meeting appeared in the July issue, pages 56-57.

In the past few years I have had a hand in more than 50 school buildings. They all have interior partitions of concrete block.

If this is an admission of crime against the brick and tile industry, then, for what it is worth, I can round up a number of partners in crime in my profession.

I am going to tell why we use concrete block. I don't sell brick, but if I had to try, I think I know how I would go about it. Maybe I can give you some angles from my side that you had not thought of.

I may step on some toes. I will expect to show my ignorance. If I can arouse you to a *general* effort to show me and some other architects where we may have been missing a few points that would tip the scales another way and improve the schools—then my being here will serve a purpose—for you, for me, and for the schools.

In 1947 Aeck Associates designed four schools for Elberton, Ga. They were steel framed, with wood roof deck, plywood partitions and brick cavity walls. The cost was $6.00 per square foot.

Since that time our schools have run a course of evolution that could be followed by anyone if the buildings could be lined up side by side. This evolution process has been pursued with purpose and vigor to find the basic principles that would permit increasing the value and quality of our buildings while holding the costs in hand.

Statistically, we have maintained our goal. The schools today are non-combustible throughout, better equipped, more comfortable, easier maintained. In 1956 costs ranged from $6.50 to $8.50 psf.

Precast Planks

We are still using steel frames, although on two recent jobs, which are two-story, concrete has done nicely. The wood deck has changed to precast planks of Portland cement and wood fiber. It is incombustible and it offers good acoustic and thermal insulation. It has particular characteristics that suit it very well to steel or concrete construction, although its form is entirely different with each system.

The plywood partitions are gone, too. There is the concrete block. And I suppose now the gauntlet is down.

Block Partitions

We have believed partitions of concrete block are the least expensive, are not expensive to maintain, and when painted are acceptable in appearance. Please keep sight of the fact that the great majority of schools in Georgia are expected to cost about $7.50 psf.

Now partitions are space dividers. What does a space divider do?

1) It separates space, of course.
2) It is an item of fire safety if it can contain fire in one space for a reasonable time.
3) It affects sound. Sometimes it needs to reflect it, sometimes absorb it and nearly always it should block transmission of sound from the adjoining space.
4) It furnishes the base for applied finishes. In the absence of applied finish, the partition material must be acceptable.
5) It supports certain items of equipment: chalkboards, tackboards, casework, other things.
6) It can become a wall and support structural loads.

This brings in the major question of structural framing systems. Look out! This is where the architect takes you out into deep water. It is my opinion you don't have to drown but you have come pretty close already.

From here on ,let's make this a discussion of framing systems instead of partition materials. Partitions are rather easy. There is quite a lot to say about framing.

Brick vs. Block

Don't mark this down as a smokescreen to cloud the issue of brick vs. block. This is brick vs. block in low cost schools.

I'm not a salesman. If I were and faced the kind of problem that has put block into every school in Georgia, I would want that problem to be complex. I would want it to have more sides and angles than a snake has hips. This would give me more ways to approach the thing. I could get more selling points. A structural system using load bearing masonry may be one of the right tickets.

Dozen Items

Choosing a structural system sets up just about everything that goes into or on a building. Here are a dozen of the things that have to be considered. Each one is a check point. Each one has to have an answer.

1) Freedom of design—placement of partitions, sizing rooms.
2) Choice and application of skin materials.
3) Cost.
4) Size and placement of windows.
5) Finish materials — acoustics with metal pan concrete.
6) Insulation—exposed steel; roof slab.
7) Fire safety.
8) Appearance.
9) Design and installation of electrical and mechanical systems.
10) Speed of erection.
11) Sequence of building operations and their coordination.
12) Kind of contractors attracted to bidding.

I don't know how these things affect or would be affected by load bearing masonry. I do know there would be some effects and if I were selling masonry I would have some ready answers.

If this sounds like the hard way then it must be right. The architect

Frank Bull, talks with Jim Lee and Jack Carney of SBTA at June meeting.

16 units of 500 bricks each, unloaded by driver alone, merely pushing buttons.

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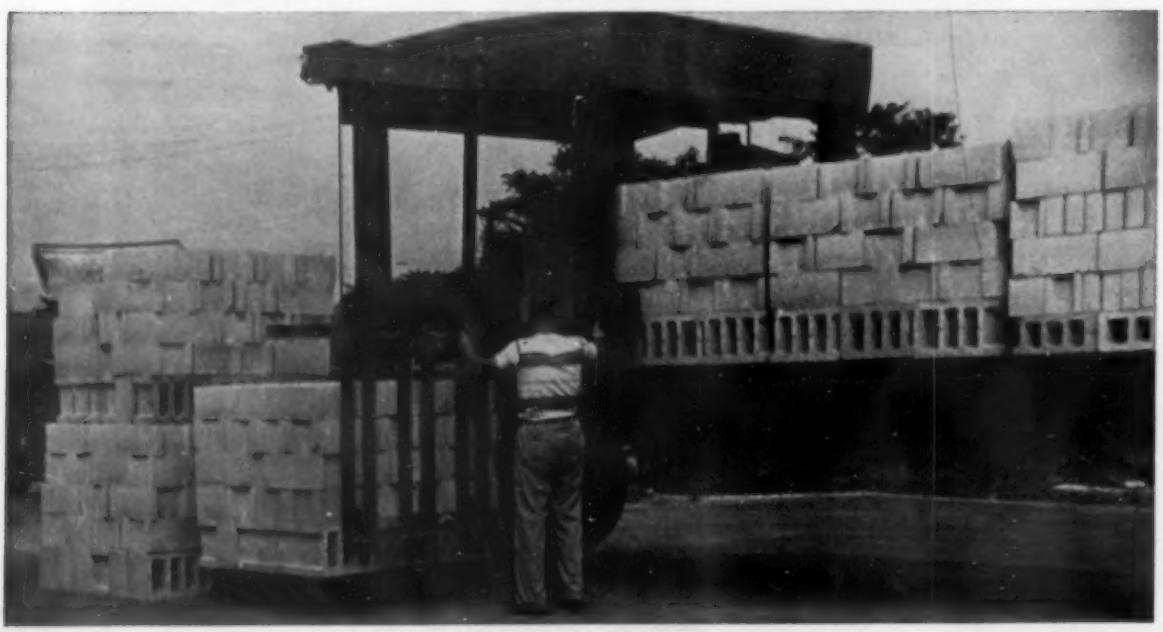

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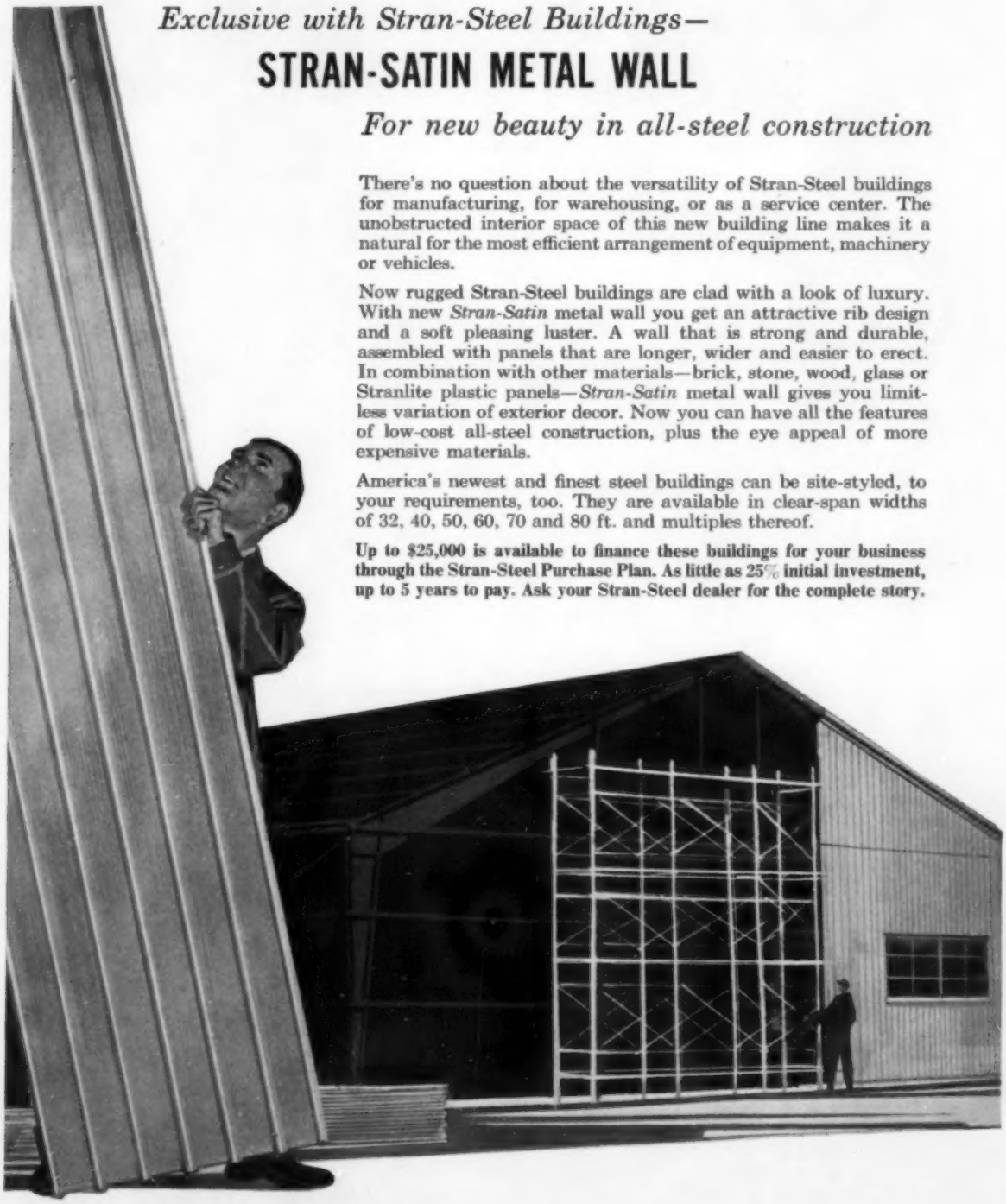

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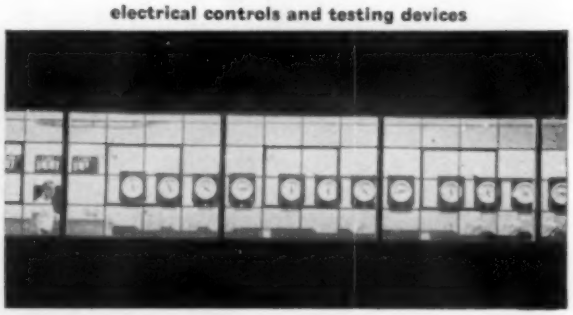

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Package Saves Labor, Cuts Costs at New Jersey

Other benefits include faster delivery, less breakage, more efficient operation with use of strapped pack.

When the New Jersey Shale Brick and Tile Corp. started operating its new plant on a 150-acre tract near Somerville, N. J., Morriss Corbman, president of the concern, wanted a packaging system to match the efficiency of what he claims to be the most modern brick manufactory in the world.

Corbman, a ceramic engineer to whom mechanization is a by-word, and his brother Mitchell, who is vice president and plant manager, realized that the use of steel strapping would save labor and material costs. But they also wanted speed in the packaging operation. An electrically-operated portable strapper was best suited to the needs of New Jersey Shale Brick.

To help implement a packaging system, they contacted L. C. Warner, packaging and shipping engineer for Stanley Steel Strapping, a division of The Stanley Works, New Britain, Conn.

Was Manual Operation

Traditionally, the handling and moving of bricks has been a manual operation. After coming out of a kiln, bricks were placed on pallets, 400 to a pallet. Fork-lift trucks then moved the pallets to a storage area where the bricks were eventually loaded on trucks.

At this point the loading operation bogged down. Bricks were lifted manually from pallets and stacked on trucks.

A man equipped with tongs can carry only eight bricks at a time. Manually loading a truck with a capacity cargo of 20 pallets, or 8,000 bricks, takes three men a full hour.

Handling Ends with Pallets

At New Jersey Shale Brick, when bricks are taken from a kiln and placed on pallets, that is the end of the handling and packaging operation. Bricks remain on pallets until they reach building sites and are used.

After bricks are stacked on a pallet, the load is encased on three sides, across the top and on two sides, with corrugated-board protectors. The brand name of the company's product is imprinted on the protectors.

A pallet-load of 400 bricks measures 30 inches square and 40 inches high. Each corrugated-encased package is strapped twice with a Stanley electric skid magazine tool. The operator merely encircles strapping, which runs off a portable reel, around the load, fixes the tool on the strapping, and presses a switch on the tool.

Tension Is Predetermined

The strapper is adjusted for predetermined tension so every strap is tightened to the same degree. Tightening, automatic seal feeding, sealing and cutting take place in rapid sequence in both the horizontal and vertical positions. The magazine on the tool takes a clip of 80 seals at a time.

After the packaging operation, a fork-lift truck lifts the pallet-loads of bricks, weighing a ton each, onto a truck for transportation to building sites. One man can load a truck in 15 minutes where it formerly required at least three men an hour to load the same kind of truck.

The same time and labor saving advantages are realized by customers. Although New Jersey Shale Brick ships to areas in a radius of 300 miles, the company has yet to experience a broken package, or even a broken strap.

No More Breakage

Chipping and breakage of bricks has been wholly eliminated since the loads of brick arrive at their destinations intact. Although it is not a major factor, safety does figure into the use of steel strapping. When bricks are loaded or unloaded by hand, there is always the possibility of employees being injured by falling bricks.

The Corbmans would like to package all of the company's products with steel strapping, but customer requirements make this impossible. Many of the contractors whom they service do not have fork lift trucks on building sites. Ton load packages cannot be unloaded by hand. At present over 50 per cent of the company's output of 500,000 bricks a week are packaged with steel strapping.

The new plant of New Jersey Shale Brick has been in operation for over two years and employs about 40 men. Dwight B. Hendryx is designer and consultant.

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NEWS OF REFRACTORIES

Net Income for Half Up for Basic, Inc.

Net income of Basic, Inc., for the first half of 1957 totaled $887,754, President H. P. Eells announced. The total for the same period in 1956 was $829,579.

Eells said first half earnings amounted to $1.10 per common share. This compares with $1.02 per common share for the first six months of 1956.

Sales and operating revenues for Basic, Inc., and subsidiaries were $12,341,580, compared to the 1956 figure of $12,147,869.

C. F. Swank Retires

C. Ferguson Swank has retired as vice president and director of Hiram Swank's Sons, Johnstown, Pa. He plans to move to Fort Lauderdale, Fla., the announcement said.

Swank had been with the firm since 1930, starting as a shipping clerk. From 1937 to 1953, he was manager of the Swank's Cleveland sales office.

Mrs. Helen Young Swank, company secretary, was named to fill his position on the board of directors. To replace him as vice president will be someone as yet unappointed.

Porter Net Sales Up $9 Million for Half

Net sales of H. K. Porter Co., Inc., Pittsburgh, for the first half of 1957 increased to $78.1 million from $69.2 million last year.

Profit before taxes this year was $7.3 million, compared with $5.3 million in the first half of 1956.

Earnings per share of common stock was $3.21 compared with last year's $3.72.

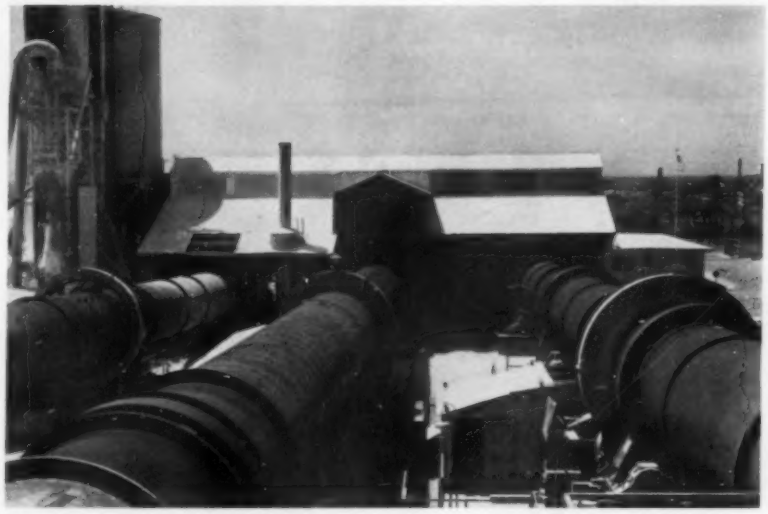
25c Green Div.

Vice president-secretary W. G. Staley has announced that the board of directors of A. P. Green Fire Brick, at their July meeting, declared the regular 25¢ per share quarterly dividend, payable August 22, for common stock.

Gladding, McBean Releases Refractory Reference Sheet

A four-page refractories reference sheet, listing various types of firebrick, mortars and fire clays, plastic firebrick, castables, insulation and miscellaneous refractories, plus their applications, have been prepared by the Refractories Div. of Gladding, McBean & Co., Los Angeles.

Included is estimating data and a color scale for estimating temperature.



View of three of the kilns at the Moss Landing plant. Center one is new.

Kaiser Expands Production Facilities

Kaiser Chemicals Division of Kaiser Aluminum & Chemical Corp. has completed an expansion program which substantially increases its capacity to produce refractory and magnesia products, Frank M. Cashin, vice president and manager of the division, announced.

The bulk of the expansion was devoted to adding new facilities to the Moss Landing, Calif., seawater magnesia plant.

New equipment at Moss Landing has doubled the seawater handling capacity and increased by more than 50% its capacity to produce Periclase, which is used in the manufacture of basic refractories for the high temperature furnaces of the steel, cement, glass and copper industries.

A large new rotary kiln was installed at the seawater plant with a capacity of approximately 150 tons of magnesia products per day, bringing total daily kiln capacity to approximately 375 tons a day.

"This expansion of our magnesia facilities is particularly significant in that it is a further step toward eliminating the nation's dependence upon foreign sources of supply of this critical raw material," Mr. Cashin said.

The expansion program, which cost $3,000,000, included additional pressing and materials handling facilities at the Columbiana, Ohio, basic refractories plant, which increased its capacity by 50%.

"As a result of this construction program, the division has doubled its 1955 capacity to produce basic brick and ramming mixes," Mr. Cashin stated.

"The story of the growth of the manufacture of Periclase in this country follows closely the trend in industry toward the increasing demand for controlled sources of raw materials, both as to quality and availability.

"So far as we know Kaiser Chemicals at Moss Landing is the world's largest producer of refractory grains from seawater," Mr. Cashin said.

The Moss Landing expansion program, completed in late spring, included the addition of two large tanks for treating raw seawater, an additional magnesia settling tank, new product handling and dust collection facilities. Two smaller tanks, formerly used for seawater treatment, were converted to reactors for precipitating magnesia from both the seawater and the calcined dolomite. An additional redwood stave pipe was installed to carry seawater to the plant from Moss Landing harbor.

The chemicals division manufactures some 40 different products, most of them for heavy industry. Among the major products are basic refractory materials in the form of brick, ramming mixes and mortars made to withstand extremely high furnace temperatures.

In addition to refractories, Kaiser Chemicals Division markets through its national sales organization chemical and refractory magnesia and calcined and hydrated aluminas.

Knauft Reports on European Trip at TRI Meet

Robert Davidson named winner in second annual TRI competition; Brinckerhoff elected president at Spring membership meeting at Greenbrier.

Among the feature events of the annual spring meeting of The Refractories Institute, held June 27-28 at the Greenbrier, were Robert Knauft's full report on his tour of European refractories industry; announcement of the winner of the TRI award for a production paper; and the election of J. E. Brinckerhoff as president for the coming term.

The meeting opened on the first day with a report by H. B. Plunkett, of A. P. Green Fire Brick Co., for the Mellon Institute committee. He indicated that TRI was one of the four oldest fellowships at the Institute.

This committee each year awards an employee of a refractory company for writing the best paper on some phase of refractory production. This year's award went to Robert W. Davidson of North American Refractories, who won the $100 prize and the trip to the TRI meeting for his paper titled "Observations on the Use of Electrically Heated Vibrating Screens."

Second award went to Donald R. Smith, Ironton Fire Brick Co., and the third award to W. O. Osborn, also of North American.

Technical Advisory Committee

Louis Trostel, General Refractories Co., reported for the technical advisory committee. He said that Julius Kaiser of Gladding, McBean & Co. was added to the committee membership.

Trostel also reviewed the effort put into producing the pamphlet which was prepared for selling the refractory industry to engineering students. He pointed out that this is not only for ceramic engineers but for all types of engineers. Trostel thought it might reach the high school level in a continuing campaign and suggested that the effort be supplemented by individual company activities.

The refractories bibliography, Trostel said, is ready for the printer. This was prepared by the Battelle Memorial Institute and is sponsored and financed by the Refractories Institute and the American Iron & Steel Institute. He also indicated that two technical papers were published this year and that the new ASTM classification committee C-8 manual was about ready for distribution.

On the second day, President W. S. Lowe, of A. P. Green Fire Brick Co., went into more detail about the joint college endeavor whereby the industry will conduct a two-day program for college students.

College Endeavor

This program will be held in the fall at Ohio State University. There will be talks by company representatives and by university professors. Dinner will be served and, of course, a registration fee established for the meeting.

Lowe reported that the next Operator's Meeting will be held in March and that Mexico Refractories Co., Mexico, Mo., will furnish the chairman for the program.

Mellon Activities

Stuart Phelps of the Mellon Institute Fellowship went into more detail on activities at the Mellon Institute. He reviewed their testing operations and research work. Also reviewed was the work done on balling and the work now being done on pressure cracking.

William J. Kenney, Mellon Institute counsel, reported on depletion. He reviewed the Dragon Cement case, which was covered in a previous issue of BRICK & CLAY RECORD. The case has now been appealed by the government to the U. S. Supreme Court. This court must decide whether or not to hear the appeal, with a decision expected in October. If the Court will hear the appeal, a final decision on their findings should come early next year.

A very interesting talk was given by Robert Knauft, The Chas. Taylor Sons Co., a subdivision of National Lead Co. Knauft recently traveled in five European countries where he observed refractories production.

(Ed. Note: We feel that Knauft's report on his observations and experiences in Europe, particularly concerning differing methods of research and production, are so interesting that we're holding them back from this report. Beginning as soon as possible, we'll run his entire report as a series, covering all countries reported on.)

Following this report by Knauft, it was announced that J. E. Brinckerhoff, vice president of Babcock & Wilcox Co., was elected president for the coming term.

E. T. Hile of Harbison-Walker, W. S. Lowe of A. P. Green and Howard West of Illinois Clay Products.

Group here at TRI meet includes, from left, W. B. Leach and E. C. Tinsley of Mexico Refractories; J. R. Richards of Crucible Steel; R. A. Ebersole of Chisholm, Boyd & White; and W. G. Young, Chicago Fire Brick.

Meeting group here includes D. M. Thorpe of General; H. H. Hopwood of North American; G. T. Stowe of E. J. Lavino, and W. H. Peterson of Valentine.

George Brush of Harrop talks to L. E. Whitesell of Wellsville and Z. L. Bresser of National Refractories.

E. E. Davis of Davis Fire Brick visits with E. E. Slick, Jr., of Haws.

T. Kauffman, Jr., and G. V. Campbell of Ramtite talk with A. C. Judd of Oak Hill.

Knauft Report and Davidson Paper

Because we feel them both to be worthy of running at full length, rather than condensed in a meeting report, next month we'll continue with feature stories from the TRI Spring meeting.

The winning paper by R. W. Davidson of North American Refractories, "Observations on the Use of Electrically Heated Vibrating Screens," will appear in the September issue of this magazine.

We are making arrangements to publish in full the report of Robert Knauft of Chas. Taylor Sons Co. on his observations on the European refractories industry, to appear as soon as possible.

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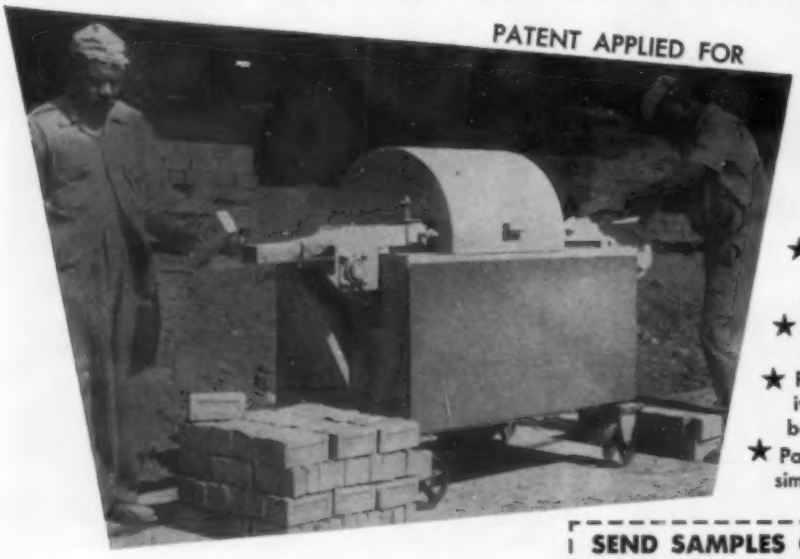

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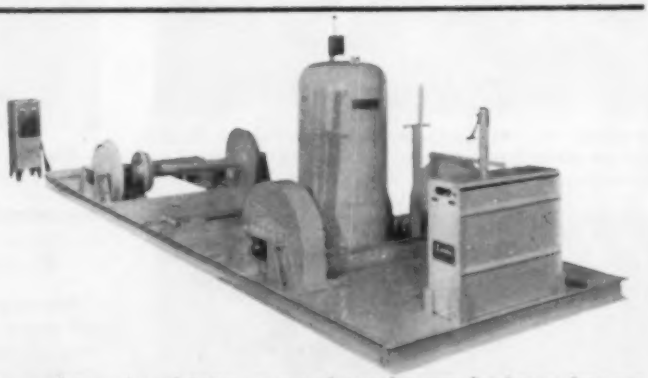

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PORTER EXPANDS REFRACTORIES CAPACITY

The Refractories Division, H. K. Porter Company, Inc., has recently signed a contract with the Stearns-Rogers Manufacturing Co. for the installation of new additional manufacturing facilities at Canon City, Colo., according to an announcement by E. G. Platt, general works manager. This new expansion means that productive capacity will be increased by more than 50%, and that Porter's investment in the Canon City works will be doubled.

"The plant will soon be equipped to manufacture low-alumina silica roof brick by the wet grinding process," said H. W. Gethin, assistant general works manager. "This product will duplicate the silica brick made at the Christy works in St. Louis, which has established such a fine reputation in the roofs of open hearth steel-making furnaces in the midwest. This will be accomplished in part by additional wet pans," he said.

Work under the contract, estimated at $272,500, began July 12. Porter will also begin a substantial maintenance program for repairs to kilns and stacks.

Better Unloading, Storage

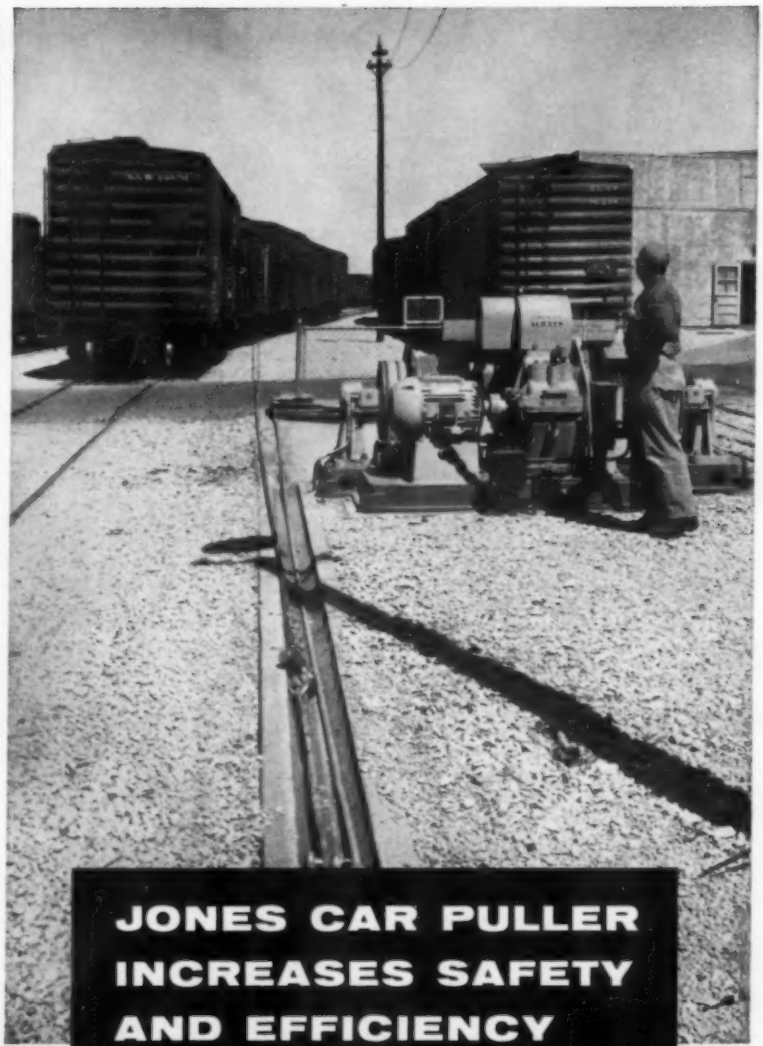
First, modern materials unloading and storage facilities will be put in to handle incoming rail deliveries. Crushing and bin facilities are being installed ahead of new, additional grinding facilities in order to assure economical processing. A late Model "X" Boyd press equipped with pause cycle and pressure control units will be added to press refractory brick. Present driers are being remodeled in order to make them a continuous humidity drier, superior to the present intermittent driers.

Automatic conveying equipment is being purchased in order to assure flexibility of operations. Kilns and stacks are being rebuilt and made higher to insure proper draft, and to obtain the high temperatures necessary for proper burning. New sheds are being built to provide cover for inventory stock and for all new refractory material in process of manufacture.

Customers will now be able to get palletized shipments of refractory brick by truck in three to four hours instead of having to wait several days for 900-mile rail shipments that they are now getting from St. Louis. Truck shipments have less breakage of brick due to the shorter haul and less handling.

Floyd W. Taylor will be in charge of the new construction project. He has been in charge of the Canon City operation since 1950, and was previously superintendent of factory 1, Laclede works, St. Louis. He was at Laclede works from 1930 to 1950.

The new low-alumina silica roof brick supplements current products at Canon City works.



JONES CAR PULLER INCREASES SAFETY AND EFFICIENCY

This Jones two-way car puller has materially increased freight handling efficiency at Corn Products Refining Company's Pekin, Illinois, plant. To move cars on either siding, the operator merely hooks a cable to one of the cars and pushes a button on the control panel. Only a small part of one man's productive time is needed, and the system is both safer and faster than former methods.

The Jones car puller is but one of the many types of Hewitt-Robins equipment for helping industry solve its bulk materials handling problems. To find out how H-R products and services can help you, consult your classified telephone directory for the nearest H-R representative, or contact Hewitt-Robins, Stamford, Connecticut.

HR **HEWITT-ROBINS**

CONVEYOR BELTING AND IDLERS . . . POWER TRANSMISSION DRIVES
INDUSTRIAL HOSE . . . VIBRATING CONVEYORS, SCREENS & SHAKEOUTS

R. H. Robinson chats with J. W. Stryker.

SCPRF Continued

advantages over competitive materials could mean savings as high as 20% in heating and cooling equipment costs and their operation.

Because of the enormous amount of recordings taken (some 311,000 separate recordings every 90 days or 3,456 bits of data every 24 hours during winter) SCPRF is adopting a punch card recording method. These cards will regularly be fed into an electronic computing machine in Chicago to rapidly digest and tabulate the data, and to assist in working out formulas much more quickly than manpower could.

Another interesting point noted by Monk, based on present research, is the possibility that maximum rate of heat gain in the test huts does not necessarily occur in summer, as presently assumed; Monk believes that in the Chicago area the maximum rate probably occurs sometime in September.

SCPRF is working closely with a major electrical equipment company in joint studies of thermal research, Monk said, with the company, of course, interested from the standpoint of their heat pump and other heating and cooling equipment. The superior qualities of masonry may lead to evidence that smaller units might be possible, giving further savings to the homeowner.

Packaging Machine

Taylor made the report on progress in packaging with primary interest in the purchase of the packaging machine by Mason City (Iowa) Brick & Tile. The unit, although bought by Mason City, will be installed in the Des Moines Clay Co. plant where field testing will be done under actual operating conditions. Taylor hoped that the machine will be set up and operating by late September.

Further modifications and improvements have been made to the automatic packaging line since the unveiling last year, Taylor reported.

Plans are underway for urging railroad and trucking people to develop better means of transportation for clay products, with particular emphasis on the possibilities in the piggyback method, Taylor said.

In other aspects of packaging, Taylor believes it will minimize chipping and breaking, which can amount to 5 to 10% loss on the job.

SCR re-nu-veneer"*

In the report on the progress of "SCR re-nu-veneer," M. H. Allen, manager of the SCPRF field engineering and development division, announced that more carefully-screened applicators are being licensed. The field development staff has been increased from three (including Allen) to nine.

Progress has been good but not as fast as desirable, Allen said. Some revisions were made in the mortar gun and six new guns are now under construction to add to the original six.

One handicap has been lack of an effective merchandising program and of merchandising awareness, Allen noted, partly due to the newness of the product. To cope with this situation, a merchandising kit has been designed by SCPI promotion men. Jack Clark showed the kit to the members and spoke of how it is to be used. The kit contains a sample or two of the "re-nu-veneer" units, a flip chart, slide viewer and slides, and ample mailing pieces, promotion booklets, etc. The kit should be available to applicators some time in September, Clark said.

Great Response

Allen reported great response to the initial announcement of "re-nu-veneer" with some 8,100 letters received based on the newspaper publicity obtained at that time. Two-thirds of the response was from prospects, the rest from contractors. Contacts with the latter resulted in about 100 requests for franchises, which SCPRF has screened down to about 45 contractors in 20 states. Allen stated that their current goal is to get about 12 more applicators in the eastern section and possibly a few more in the Pacific Northwest area this year.

Methods to lower the applied cost of the product are being studied, Allen reported, with greater volume and applicator experience likely to reduce in-the-wall costs.

In relation to the development of such products as "SCR re-nu-veneer"*, Taylor made several comments on the necessity of building-in ample profit to cover promotion costs. He believed that a small percentage of the cost, passed finally to the customer, would allow a large promotion budget to match those of competitive materials. In illustration, Taylor noted that if 10% of the old house market bought "re-nu-veneer," gross sales of the industry would go up $58 million. Using a percentage of that, based on the built-in promotion allowance, Taylor believes a promotion-advertising fund of $8.5 million would be available, to advertise the industry and its products.

A similar built-in cost could be put into the panels and other products, Taylor believes, with good results in selling for the whole industry.

Allen, reporting on the last year's events in the "SCR masonry process," feels that this is the year of the big break-through, that soon "we will see things mushrooming on this."

Several things have helped bring this about, Allen reported, including his enlarged field staff, active help and encouragement by regions and manufacturers, and a MP clinic held at Geneva in April.

Allen reported trouble in keeping up with the orders for the process fittings and equipment, orders which have started pouring in lately.

One of the big reasons for the boom, Allen believes, is the need of contractors to hold construction costs down these days, particularly since the really lush days of construction are gone, and caused also by increasing competition from other materials. Allen stated that he believes this trend is small yet but very significant. Corb Garton gave a detailed report on progress in specific areas of the country.

Other Events

On the afternoon of the second day, the business meetings of the Foundation Membership and Board of Management were held. Taylor presented the proposed budget and program for 1957-58. The budget was approved by the board.

In bringing the meeting to a close, Chairman Shipley called on Harry Wissman of Arthur D. Little, Inc., and Douglas Whitlock, chairman of the board of SCPI, for their comments and impressions of the two-day Foundation meeting. Both expressed gratification at the progress to date and confidence in the future of the industry through the developments now under way. Whitlock urged the manufacturers to make more use of current and future results. He promised continued SCPI efforts to promote the results of the Foundation's work.

* Reg. U. S. Pat. Off., Pat. Pend., SCPRF
** Reg. T. M., Pat. Pend., SCPRF

Quality Control at Harbison-Walker

"How to Control Your Clays, Processes," a story about the excellent quality control methods developed and used by Harbison-Walker Refractories Co., Pittsburgh, appeared in the July issue, pages 60-62.

The story written by W. D. Fitzpatrick and C. L. Thompson, assistant manager of quality control and manager of quality control at H-W, reported the various methods used to keep control of materials and products. We regret that the byline, giving Fitzpatrick and Thompson credit for supplying this information, was inadvertently dropped in the presstime rush.

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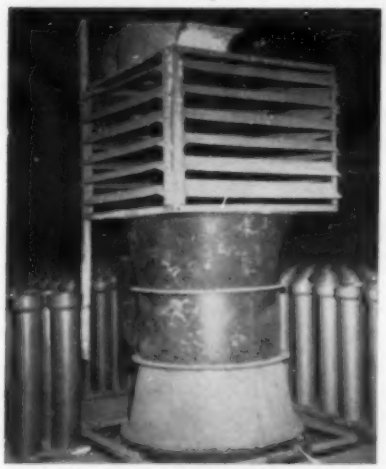

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The Robinson Fan of correct design and capacity is selected for the application.

For every application the fans are ruggedly constructed to meet the most severe demands of the operating requirements.

It will pay you to place your Pipe Drying problems, as well as your air handling problems, in the hands of Robinson's specially trained engineers.

SEE OUR CATALOG IN Ceramic data book Page 277

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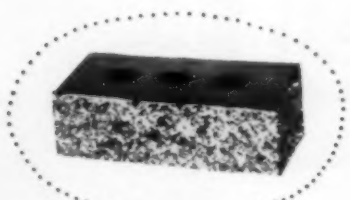

Thinking about color?

The trend to color is apparent in all kinds of building materials *including brick.* If you've got colored brick in mind, Ferro can help you make it.

We will work with you in establishing techniques, processes and quality controls, to maintain the color uniformity and the light and heat stability our colors make possible.

Ferro makes quality colors for all brick coloring methods — glazing, body staining, engobe and sandblasting. Our know-how comes from years of experience in all phases of brickmaking . . . in designing and building kilns . . . in producing finest inorganic colors.

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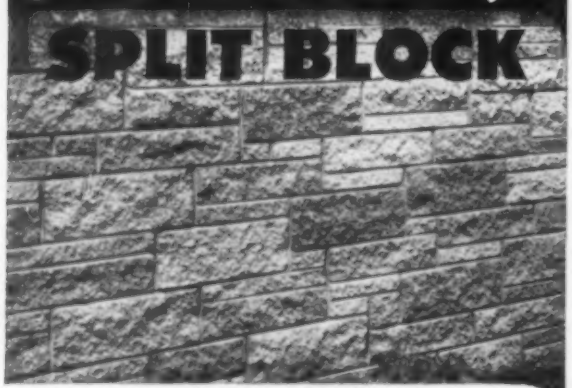
SPLIT BLOCK



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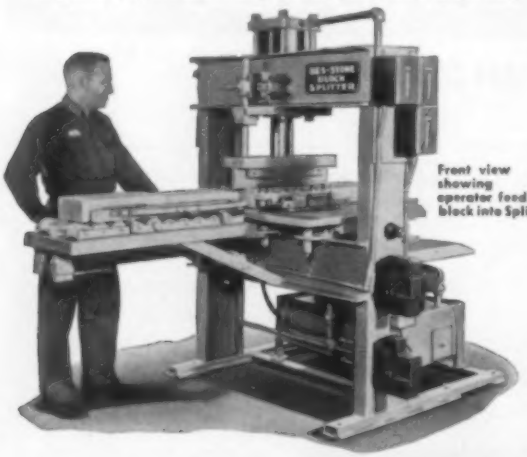

Front view showing operator feeding block into Splitter.

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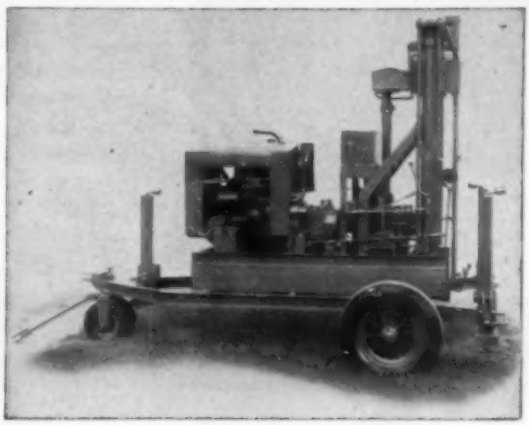

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Glass Fiber Mat Prolongs Tile Life

A new application for porous glass fiber mat promises farmers considerable savings by adding years of life to the usefulness of field drainage tile.

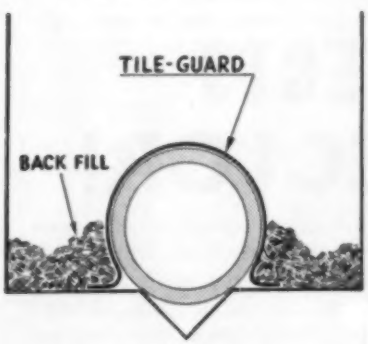
The product, marketed by the L.O.F. Glass Fibers Co., Toledo, under the name "Tile-Guard," involves the use of glass fiber mat as a covering for farm drainage tile.

A thin, but strong bonded mat of inert glass fibers, Tile-Guard reportedly will withstand underground alkalis and acids that cause such conventional coverings as straw, corncobs, sawdust and other organic materials to rot and lose their protective quality, the company claims.

Willard W. Schaller, farm drainage contractor, Maumee, Ohio, was the first to determine the practicability of the new application. He found glass fiber mat was porous enough to permit the passage of water, but would restrain most soil particles, indicating increased drainage capacity and longer useful life of the tile.

During his years of trenching, Schaller says he often wondered if some material could be found to cover drain tile that would function more satisfactorily and still be economical.

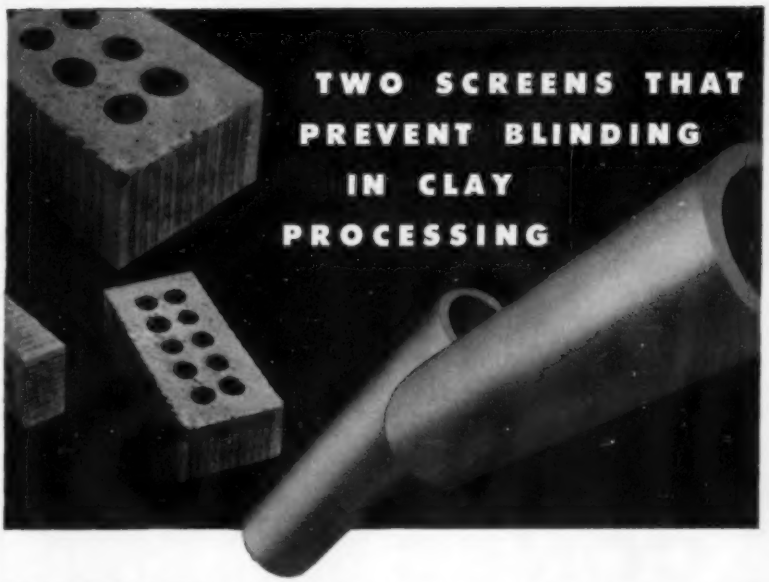
He secured several hundred feet of glass fiber mat from L.O.F. Glass Fibers Company and ran a series of preliminary tests.



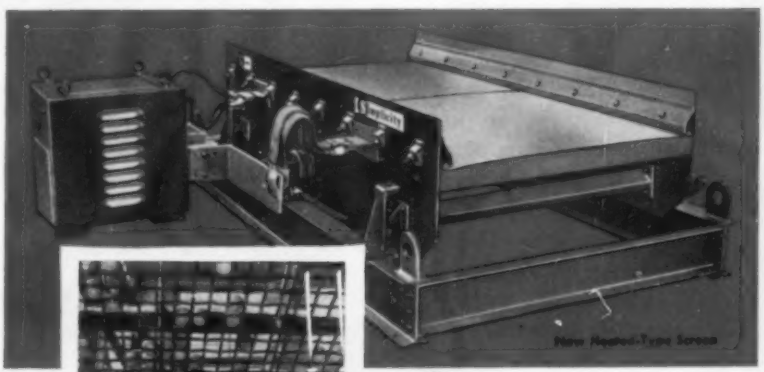
An extensive test was run recently at the company's Waterville, Ohio, research laboratory. Two 8-foot sections of 4-inch clay drain tile were buried in a soil bed. One section of tile was covered with Tile-Guard while the other section was installed without any covering. The bed was subjected to accelerated rainfall of 3.2 inches over a period of several days—equalling the rainfall in northwestern Ohio and southeastern Michigan during the second wettest month of the year.

Recorded test data showed the tile protected with Tile-Guard maintained a drainage rate 10 times greater than that for the uncovered tile used as a control. The covered tile showed no soil buildup, where a 5% buildup in the uncovered tile was recorded.

Tile-Guard is applied by means of a simple roll device attached directly to the tile laying chute on the ditching machine.



SIMPLICITY'S NEW HEATED-TYPE AND BALL-TYPE



Underneath view of Ball Tray Deck

One of the greatest clay screening problems is that of blinding . . . the severe impairment of production by sticky, moist clay clogging the holes in the screen.

Where square openings are less than 5/32"; Simplicity Screens embody electrical heating. The screen wire is heated to approximately 140°, which prevents blinding, but does NOT DRY THE BED OF THE MATERIAL. This makes possible operation of the heating elements for only about 45c per hour. High-amperage, low-voltage current presents no safety hazard.

This new heated screen features an improved method of heat distribution, and easier screen cloth replacement—none of the heating elements are disturbed when changing cloth. Elimination of screen cloth whip results in longer cloth life.

Where screening needs require screen cloth with square openings of 5/32" or over, Simplicity Ball Tray Screens employ bouncing rubber balls, trapped between the screen cloth and a retaining cloth. Vibration of the screen agitates the rubber balls, which knocks clay loose from the wires . . . no matter how wet the clay may be. Eliminate your clay screening problems permanently with Simplicity Heated or Ball-Type Screens. Both types have proven their economy and dependability in tough applications throughout the country.

For all details on these screens and other Simplicity conveying, screening or feeding equipment, write us today.

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Plaques of Orton Cones placed so that they may be observed through the peep holes provide a continuous visual check on the progress of firing throughout the kiln during the critical high fire stage. Other plaques of cones placed in the ware setting provide a means of checking upon the heat work which was done.

Request a copy of the Temperature Equivalent Table and the highly informative free booklet THE PROPERTIES AND USES OF PYROMETRIC CONES prepared by the Foundation.

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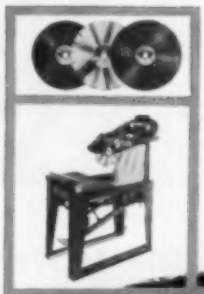

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How To Remove Oil From Brick

At the July SCRPF meeting, an effective way to remove oil from brick was reported by Frank Todd, of Moland-Drysdale Corp., Hendersonville, N. C.

Todd told of a load of brick picking up oil and grease accidentally on the truck while being shipped to a house job they were supplying. The stained brick were put into the wall and, of course, the home owner complained. He wanted the soiled brick removed and threatened to force Moland-Drysdale to replace them.

Naturally concerned, since the job involved 20,000 brick, Todd called SCPRF at Geneva for help in getting a solution to the oil removal.

Benzine Does the Trick

The laboratory suggested that Todd take raw clay, mix it with benzine, and apply it to the stained brick as a form of poultice. Todd did this, with the additional idea of spraying a little benzine on the stained brick before applying the poultice. Some 45 minutes after applying the poultice, Todd found that all the oil or grease had been pulled out and the brick was completely clean.

Todd further noted that he had no trouble removing the poultice, that no raw clay stuck to the brick involved.

TRADE NEWS

Foote Mineral Co. stock was traded for the first time on the New York Stock Exchange last month. Foote's board chairman, Gordon H. Chambers, made the first purchase—100 shares at 60¼ per share.

Harold S. Silver has replaced H. W. Story as general attorney for **Allis-Chalmers.** Story is retiring after 38 years with the company.

Arthur S. Down—formerly with Hills McCanna and Turner Brass—has been named eastern division sales manager for **Flick-Reedy Corp.**

Kwik-Mix Co., a division of **Koehring Co.,** of Port Washington, Wis., recently announced the appointment of Armstrong Caster Co. of Denver as a western distributor for their plaster, mortar and concrete mixers.

Core drilling was recently completed on the **O. Hommel Co.'s** proposed 20,000 sq. ft. research laboratory adjacent to their Carnegie plant. Construction is scheduled to start before September.

Robert G. Allen has been elected to a newly-created vice-presidency by the board of directors of the **Bucyrus-Erie Co.**

BRICK MANUFACTURER SAVES 24 MAN-HOURS PER DAY WITH HYSTER LIFT TRUCK METHOD

This Hyster lift truck gets in and out of tight spots in this updraft kiln.

LAFAYETTE, LA. — Using two Hyster pneumatic tire lift trucks, Mike-Baker Brick Co. has effected a saving of more than 24 man-hours per day. One lift truck, of 4000 lb. capacity, is equipped with Bickerstaff fork and a side-shift carriage (for easy positioning of forks); the other, of 2000 lb. capacity, also has a Bickerstaff but because of its excellent maneuverability a side-shift attachment is not required.

Green brick, stacked 489 per hack in a standard pattern, are taken to the drying shed by the 2000 lb. Hyster truck at the rate of 50,000 per day — or 102 round trips per day over unpaved and rough ground for distances up to 300 feet. Pneumatic tires on the lift truck are considered a "must" for this type of operation.

Company owners say that in addition to sizable savings in time, the Hyster method of handling effects better utilization of space and less breakage.

Your Hyster Dealer can help you develop a better handling system. Call him today — he may reduce your handling costs as much as 80%.

Pneumatic tires carry bricks easily over rough ground.

Call your Hyster Dealer today. He is listed in your telephone directory under "Trucks-Industrial"

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The following is taken from Technical Bulletin #5008—"CERAMIC GLAZED SEWER PIPE", by Pemco's Technical Supervisor-Glazes. (Complete report available on request.)

Report to SEWER PIPE MANUFACTURERS

1 It is well known that when a glaze is applied to a clay body, a good "fit" of glaze to body is necessary to avoid crazing and reduction in structural strength.

2 We have found that the job of ceramic glaze development for most sewer pipe bodies is one of custom matching local clays and for particular plant operating conditions.

Write for Technical Bulletin #5008. You'll see that Pemco's "know-how" on ceramic glazing of sewer pipe can be of tremendous importance to you. In addition, specific advice and assistance is available to you quickly through the Pemco representative in your area.

We'll also send you information on glaze trials run by Pemco on your own local clay to result in the development of a custom glaze for you.

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World's Largest Manufacturer of Glazes for the Ceramic Industry

MINUTE MONEY MAKERS

Car Boards Replacement

In many brick & tile plants, wooden car boards are used to close both doors in railroad cars. Stark Ceramics, Inc., of Canton, Ohio, reports they've found great benefit in material cost, time consumption and results by using perforated steel strapping for this purpose. Steel strapping nailed to the jambs of the car doors, they report, is less costly, quicker and more conveniently installed.
It weighs less but does an equal job (or better) of preventing load movements from jamming doorways. At destination, by simply snipping the strapping, the whole doorway is open for unloading.
Two of the biggest advantages reported by Stark:

1) The ability to let the loading door completely open until the car is finished and at any time later the steel straps may be drawn tight against the load and sealed.
2) Steel strapping eliminates any protruding surface along the interior side of the box car and will result probably in less damage in transit.

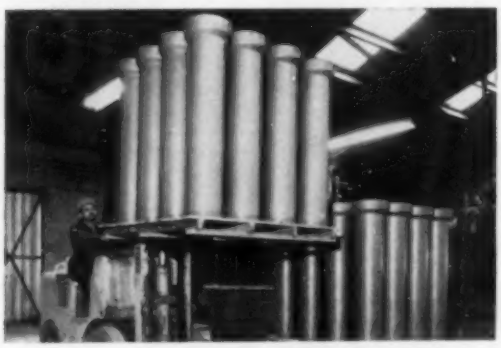
Repair Station

This kiln car repair station is an aid to better maintenance. The double hoist allows cars to be lifted vertically, thereby

giving the maintenance crew easy access to the wheels and undercarriage. The station can be located anywhere along the route of kiln cars without hindering normal operation when not in use.

Dumping Scrap Hoppers

Pacific Clay Products, California, has devised a simple method for moving and dumping scrap clay hoppers. They constructed platforms on which they mounted hoppers. Now a lift truck operator can easily pick up the platform and handle the job of dumping.



Pipe Handling

American Vitrified Products Co. at East Liverpool, Ohio has been using this Towmotor lift truck to move extruded pipe quickly and safely. The pipe is placed on the skids at a rate of some 16-pipe loads every four minutes. The Towmotor truck is reported to be making the complete 300 ft. roundtrip to the drying oven and back in time to meet the next load.

Hopper Mirror

The driver of one loader came up with this unique idea to make his job easier and more efficient. Placing a mirror on the side of the hopper enables him to see, without climbing up on the hopper, if there are any large chunks clogging the mechanism. If there are, he can remove them before they can halt the feeding operation. Before his innovation, the driver wouldn't know of a stop-up until the operation has halted, and he would usually have to empty a full hopper to get to the cause.

Pemcolors by Pemco

A wide range of colors formulated to give you perfect uniformity in application and matching characteristics on structural clay, tile and glazed brick... by one of the world's largest producers of inorganic colors and glaze frits for the ceramic industry

Pemcolors and famous Pemco personalized service that you can rely on for advice and assistance on application and production problems are available to you through the informed Pemco representative in your area. For specific color data, or to have a Pemco representative visit you, just write

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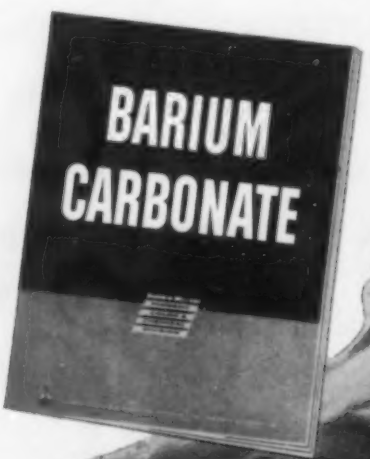
Even high sulfur-bearing clays can be effectively treated to avoid scum and efflorescence—if the Barium Carbonate used is light and fine enough to make effective contact.

Sherwin-Williams OZARK Grade 50F Barium Carbonate is especially prepared to meet brick and tile requirements. In addition to free-flowing feed characteristics, it has exceptionally low bulk density which enables maximum contact with the clay and higher reactivity.

Other grades for glass manufacture and many other applications. Write or use coupon below for technical bulletin covering properties and analyses.



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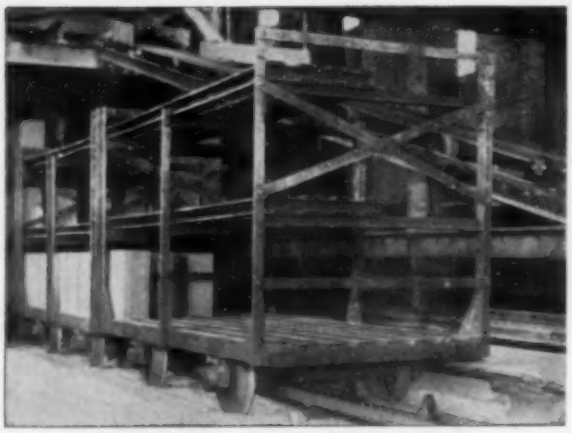
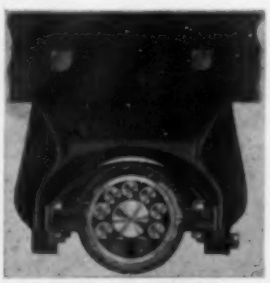
COMPANY_____

ADDRESS_____

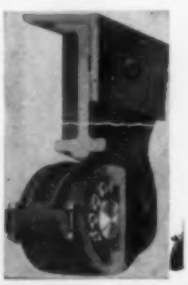


Dryer cars at Jenkins Brick Co., Montgomery, Alabama

Dryer Cars by Chase



DUST PROOF OIL RETAINING BOXINGS, keep bearings free from grit and sand.



FLEXIBILITY OF BOXING takes care of irregularities in the track, car frame, or bent axles without increased friction.

All dryer cars, single, double, and triple deck, are equipped with patented Chase bearings. These are dust proof, oil retaining, flexible boxing with roller bearings. Note also the renewable steel liner and heavy, strong construction of our bracket and boxing. For 15 years' service, order Chase cars with Chase bearings.

Write Now

Chase FOUNDRY & MANUFACTURING CO.

INDUSTRIAL CAR AND TRUCK BUILDERS FOR OVER FIFTY YEARS

2300 PARSONS AVENUE • COLUMBUS 7, OHIO

COLUMBIA Continued

Five pneumatic tired Hyster lift trucks are used in the entire operation, and three are equipped with mechanically operated Bickerstaff forks for kiln setting, kiln drawing and yard loading on to trucks. The fourth is equipped with pallet forks for yard loading, while the fifth truck is used for handling door brick and yard clean up with dump beds.

The entire yard has been stabilized by leveling with crushed stone and oiling. A number of movable, metal sheds have been built and placed on the yard to protect workers and keep operations moving, regardless of weather conditions.

Columbia Brick and Tile had increased its yearly production approximately one hundred per cent in the last five years, to a total of some eight million brick equivalents, while improving the quality and diversity of its products, and has gained wide acceptance by leading architects and construction firms in the mid-west.

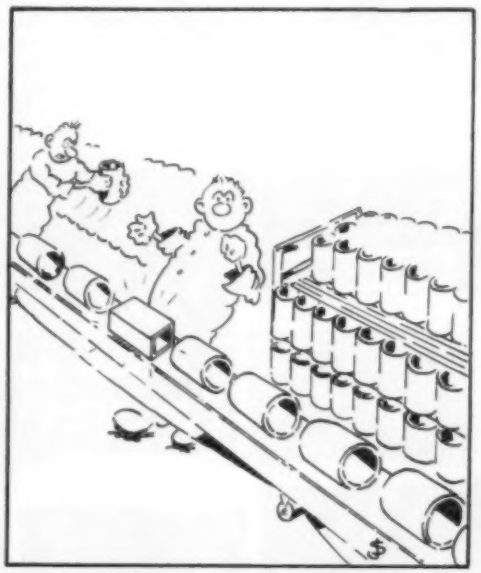
Whether the color phenomena in our everyday lives in its many forms, cars, homes, offices, public buildings and appliances is the result of the influence of "My Lady" in her rise in greater prominence, affecting all fields of our daily lives, or to some lesser influential factor, is beside the point. At any rate, romance has finally hit the building brick industry in recent years to bring color to its greatest prominence since the advent of the "Little Red Schoolhouse".

Our residential housing areas no longer look like barracks, but take on a custom built appearance of brightly colored exteriors and interiors in many shades and blends; likewise schools, factories and office buildings radiate new charm, character and individualism that sets them apart from their surroundings.

We, as brick manufacturers must furnish through research and skill, materials that the architect, the designer and the builder may use to create buildings of distinction, color and charm, if we are to survive as useful entities of our times.

Any one of us could give a one hundred year, or five hundred year guarantee for stability of our products, but few of us have the capacity or desire to be a Jules Verne, and we are concerned with the demands of the immediate future and present, so we take the "Rock of Ages" and add color and design to it to make it acceptable, or even sought after.

(To Be Continued Next Month)



NEW FIREPROOF

1. Eliminates **FIRE HAZARDS**
2. Will not **STRIP** or **TEAR**

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The original P.V.C. coated *Conveyor* **BELTING**

When the belt stops and the driving drum doesn't — there is danger of fire — but NOT if you use new SCANDURA P.V.C. coated conveyor belting.

Developed and tested by our parent company in the United Kingdom since 1946, SCANDURA is now made in our Charlotte, N. C. plant. Here is a belt that absorbs terrific impact with minimum abrasion. Write for free catalogue showing how you can use SCANDURA to advantage in your industry.

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SCHOOLS continued

has worked hard and sweat the big drops too often developing methods of getting what he wants in a building. Less than thorough analysis in presenting other methods will not shake him up very much.

Where to Now?

Here is part of the answer. These are letters from Jack Carney on your letterhead. They solved a difficult problem for us; make it feasible to use brick in a particular way.

Over there is another part of the answer—Bob Taylor and his work with ideas. But I believe there is a part that is missing.

When we decide to use a brick there is plenty of help in looking at colors, textures and prices. You give the whistle two toots and in two days you have enough samples to build a patio, with barbecue pit and dressing rooms. But who comes around and sells the idea of using a brick? The mailman, and he doesn't have his heart in it.

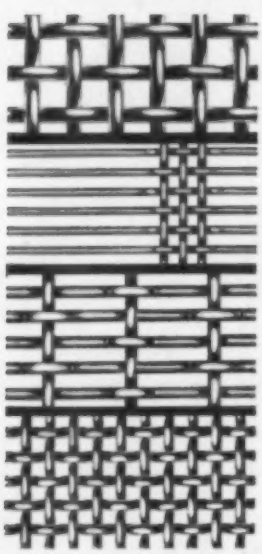
The mailman brings the same poundage on *concrete block, glass block and gypsum block, electric fixtures, plumbing fixtures, and store fixtures, structural metal, miscellaneous metal, and ornamental metal, elevators, ventilators and insulators, plastics, mastics, bitumastics, lumber grades, window shades, drafting aids —and taxes.*

Two years ago there was *one* fairly well known folding door, Modernfold. They were heavy, expensive and something you heard about more than you saw. Today there are hundreds of folding doors. Prices have come down and you see them everywhere. You also see the salesmen. You see so many you can easily understand how Custer felt when he uttered his famous last words about the Indians.

This is the end of my talk. Jim Lee warned me to be prepared for some sharply pointed questions. I'll start it by asking the first one. And this is part of the technique I've been preaching. This is called thinking of the questions and the answers before somebody else does.

Question: I thought the architects led the way in developing use of materials. They take the credit for it. Now you tell us the clay products people are supposed to work it all out and hand it over. How is the brick salesman supposed to know about the design and installation of electrical and mechanical systems?

Answer: You won't have to design it. Do you know whether or not all the wiring will be exposed? The steam pipes will have expansion joints but can they be anchored to a 6" SCR brick wall? Can that 8" solid wall be spread to a cavity to get some plumbing up inside of it? There will be two 4" vents to the roof. Maybe the pipe chases will work as load bearing, too. Will you wait for the architect to ask all those questions? Or will you come in with the answers ready and state them as selling angles to convince that masonry is the answer? As Ernest Hemingway said, that depends. Hemingway was asked if there is truth in the legend that carrying a flaming torch in the jungle is protection against wild animals. He said, "That depends — on how fast you carry it."



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Keep your screening and sizing operation costs in the black with L-S replacements. They give better resistance to wear, vibration, heat and pressure because they're tougher, stronger and more rigid . . . screen openings stay accurate indefinitely . . . edges are more carefully finished. L-S Screens reduce downtime and replacement expense, insure better product quality and uniformity. Specify L-S woven wire screens or cloth next time—they offer more for every dollar invested.

Expert technical counsel, by L-S representatives, on all your problems concerning wire cloth and screen.

Write For Condensed Screen Reference Catalog

SINCE 1856

Ludlow-Saylor designs and builds its own looms to produce better wire cloth and screens of stainless, monel, bronze, copper, brass, oil-tempered, high-carbon, or any other wire.

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604 South Newstead Ave. • St. Louis 10, Mo.

SALES OFFICES: Birmingham, 1727 Sixth Ave., North; Chicago, 5807 W. Diversey; Pittsburgh, Union Trust Building; Houston, 1213 Capitol Ave.; Denver, 1530 Carr St.; WEST COAST: Star Wire Screen and Iron Works, Inc., 2515 San Fernando Road, Los Angeles; Subsidiary, Ludlow-Saylor Wire Cloth Co.

TRADE NEWS

Kyanite Mining Corp. of Cullen, Va., announces the appointment of Richard E. Whitson, Jr. as a sales representative. Whitson was formally with Dominion Minerals Division of Riverton Lime and Stone Co., Piney River, Va.

George E. Long, past President and retired Chairman of the Board of Directors of **Koehring Co.**, Milwaukee, Wis., passed away in January after a short illness. He was 70 years of age at the time of his death.

The **Flack Equipment Co.**, Toledo, Ohio, has been appointed Industrial Distributor for the Kwik-Mix Moto-Bug, a multiple purpose material handling unit.

One BICKERSTAFF BRICK FORK

is equal to 8 men with brick barrows

Mechanical handling with Bickerstaff Brick Forks is the modern method—saving time and money and increasing profits.

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modern mobility

get to the job—do it—get out with the

B-27 mobile drill

SAVE TIME—This rugged combination earth auger and core drill lets you use a light-weight carrier for maximum speed and maneuverability.

It can be mounted on a tractor, barge or truck of only ½ ton capacity. The Mobile B-27 dismounts quickly and easily.

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SAVE MONEY—Engineering skill and thorough field testing have reduced moving parts to a minimum. Efficient power take-off cuts your initial investment and reduces maintenance problems.

George E. Gopher says: "No time wasted on complicated setups."

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GRANULAR & MILLED
for
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140, 200, 400 Mesh Sizes
Send for Data Sheet
Orefraction Inc.
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LETTERS Continued

Lightweight

Editor, BRICK & CLAY RECORD—Your editorial on page 35 of the July, 1957 BRICK & CLAY RECORD is indeed very interesting.

Using bloated shale as the aggregate we have by the Burnite Process made some very fine SCR's, which have high insulating value and are about 25% lighter than those made by using raw shale.

We do not use any Portland cement. The firing cycle for our ware is about 13 hours. In the manufacture of our ware we use only inert materials. The cost of a Burnite plant is about three-fifths the cost of a brick plant to make an equal amount of ware.

In the Burnite pilot plant operation we used scoria as the aggregate in manufacturing blocks 8" x 4" x 16", having 50% cells. After molding, the blocks were dried for about 10 hours. The glazing materials were then applied and the ware and glaze were fired in a single cycle, to a temperature of about 2,000 F. These units did not shrink, warp or fracture in firing. The Burnite ware is just as perfect after it is fired as it was when it came out of the mold.

In using the Burnite process we can mold any of the shapes and sizes that can be made on a concrete block machine or on a brick press. The Burnite ware is completely ceramic. The Burnite process has eliminated the problem of expansion and contraction in the wall which has been a constant problem faced by the manufacturer of concrete blocks. The cost of manufactureing Burnite is comparable to the cost of concrete block. Burnite products are desirable for a backup wall or for the entire wall structure.

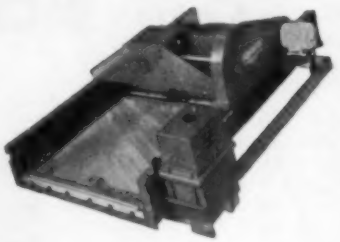
For the manufacture of Burnite products we have reserves of about 20,000,000 cu. yds. of base material for the Burnite binder . . . sufficient to satisfy 50 large Burnite plants for 100 years.

Some of the very finest product we have made has been from using bloated steel furnace slag. It fires a beautiful light gray with a pinkish tinge. It also takes a very fine glaze.

For the last two decades the lightweight concrete block industry has absorbed a very substantial portion of the brick and tile industry. We have the proven success with which to manufacture lightweight, insulating large ceramic structural ware which should be used by the brick industry.

Will the brick industry sit complacently by and let the lightweight block industry produce lightweight ceramic structural ware, to take the place of the concrete block? Or will the steel industry take over the production of lightweight ceramic ware as an outlet for its tremendous production of slag from its many furnaces?

William H. Burnett
U. S. Burnite Corp.
Hutchinson, Kans.



The Leahy® Heated Screen Maintains Peak Production

Measure the daily tonnage produced by a Leahy screen with FlexElex® heating day after day, month after month. Not only does it hold at a uniformly high level, but the sizing is exceptionally accurate.

Such performance is possible partly because differential vibration and FlexElex heating combine for the optimum as your normal production. In addition, troublesome flexible connectors have been completely eliminated, to reduce down time practically to the vanishing point. Even jacket changes, without the need for breaking or remaking of electrical connections, are effected in a matter of minutes.

Truly the Leahy Screen is unsurpassed for economical production of accurately sized clays and shales. For full information, send for Bulletin 16-EH.

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NO-BLIND VIBRATING SCREEN
— offers —
INTEGRATED HEAT SCREENING
THE DEISTER CONCENTRATOR COMPANY
The Original Deister Co., Est. 1906
913 GLASGOW AVE. FORT WAYNE, IND.

The Demand Is Increasing For
GRAY BRICK and RICHER DARK RED SHADES

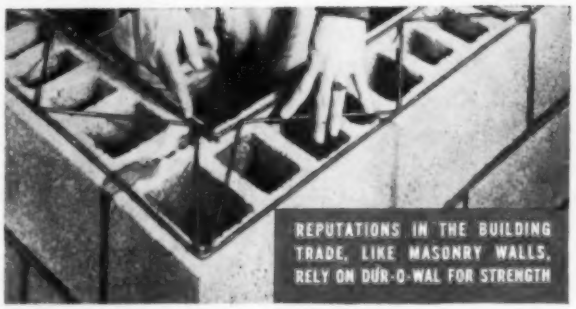
"NATIONAL" MANGANESE

Turn Buff and Light Clays Gray

Flashes Red Clays to Dark Reds, Blacks and Gun Metal Shades

Write for information.

NATIONAL PAINT & MANGANESE CO.
Lynchburg, Virginia



Throughout the nation leaders in the building industry are depending increasingly on Dur-O-waL, the masonry reinforcement of proven performance. This high quality, custom-fabricated reinforcement sets the standard for the world.

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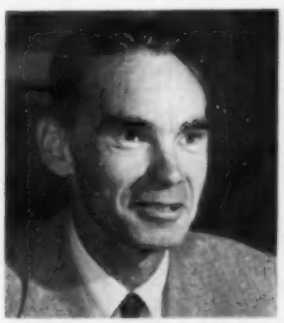


Charles W. Kraft, President
Kraftile, Inc., Niles, Calif.

Largest producer of structural glazed tile West of the Rockies

Chuck Kraft Says...

"MOTION-TIME ANALYSIS doubled our 'Off-bearers' productivity."

How can motion-time analysis trim your labor costs, improve the quality of your product?

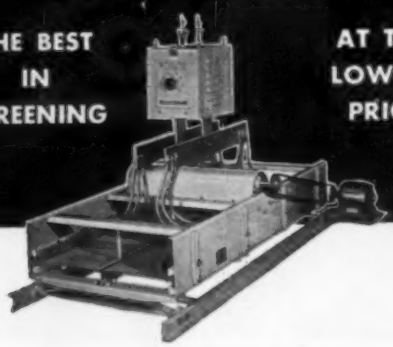
Write...

A. B. SEGUR & COMPANY
OAK PARK, ILLINOIS
Industrial Engineers

UNIVERSAL

THE BEST IN SCREENING

AT THE LOWEST PRICE



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Be sure to get the facts regarding the new improved Universal Screens and Unilec Heating! Just ask for catalog #150.

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Racine, Wisconsin
Quality Screens Since 1919

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Glazed Brick and Tile Producer
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- **GLAZE FRITS**—Lead bearing and leadless compositions for all types of glazed ware.
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- **ENGOBE STAINS**—A complete palette for slip painting and all-over Engobe decorations.

"The World's Most Complete Ceramic Supplier"

THE O. HOMMEL CO.
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This Is

FLUORSPAR

(Calcium fluoride —- CaF_2)

Ore as mined in Southern Illinois

In finely ground form and mixed with the clay, a small amount will prevent

GREEN SCUM

on buff brick surfaces

Write for data and free sample, explaining your problem.

MINERVA OIL CO.

FLUORSPAR DIVISION
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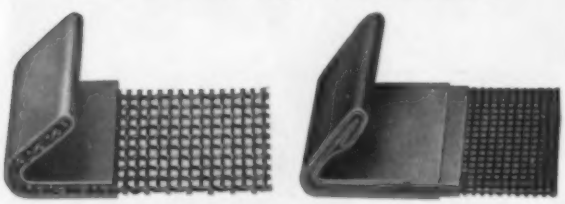
ELDORADO, ILLINOIS

Tyler Screen Sections for All Makes of Screening Machines!



Screen sections of Tyler Woven Wire are fabricated for all makes of vibrating screens in any mesh or metal. They are made up with hook-strip or bent-edge construction to suit the machine on which they are to be used.

Tyler rugged, accurately-applied hook-strips make possible stretching and maintaining the screens at drum-head tension, which is essential for successful screening and long screen life.

THE W. S. TYLER COMPANY
CLEVELAND 14, OHIO
Manufacturers of Woven Wire Screens and Screening Machinery
Canadian Plant—St. Catharines, Ontario, Canada

WE CAN DELIVER*...

★ SOFT MUD BRICK MACHINERY
★ PUGMILLS
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*POTTS ENGINEERING AND MANUFACTURING FACILITIES ARE AVAILABLE FOR IMMEDIATE PROCESSING OF YOUR ORDER. THIS MEANS MINIMUM DELIVERY TIME.

WRITE, WIRE, OR TELEPHONE FOR COMPLETE DETAILS
OR
ASK ANY OF OUR SATISFIED CUSTOMERS

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POTTS—FOR QUALITY CLAY MACHINERY
ESTABLISHED 1885
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INDIANAPOLIS, INDIANA

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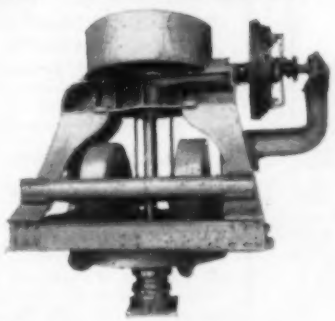

give you:

- Size material you want.
- Volume through higher speeds.
- Lower operating and maintenance cost.
- No screens to clog—handles wetter clay.
- 6' pan—shorter plows—less power consumed.
- Pan rim discharge slot readily adjustable.

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EAGLE IRON WORKS

Send for Bulletin 754.

EAGLE IRON WORKS

131 Holcomb Ave. Des Moines, Iowa

Tufhorse KANT-RIP

NO. G-9

GLOVES
HAND PADS
MITTENS

PROTECT WORKERS' HANDS!

HEAVY SPLIT-COWHIDE GLOVE NO. G-9, TRIPLE STITCHED. $16.50 PER DOZEN PAIRS.

Avoid costly injuries to the hands of your workers by giving them the protection they need—Tufhorse gloves, hand pads or mittens. Made of the finest cowhide, they are flexible and comfortable to wear.

ORDER SAMPLE PAIRS AT "PER-DOZEN" PRICES

Please send me samples of

- ☐ Glove No. G-9 ($16.50 per dozen pairs)
- ☐ Mitten No. 300 ($12.60 per dozen pairs)
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DES MOINES GLOVE & MFG. CO.

DES MOINES, IOWA

Classified Advertisements

Notice

New Classified Advertising Rates

Effective January 1, 1957

Limited to Want Ads, Consulting Engineers, or Used Equipment ads, (wanted or For Sale.)

TRANSIENT WORD ADS: 12c per word for each insertion.

Headings such as "Wanted", "For Sale", etc. and address to be counted as part of the ad. Minimum charge $2.00 each insertion.

POSITION WANTED ADS: $1.50 for 25 words or less; each add'l word 10c.

FOR USE OF BLIND ADDRESS: (Care of BRICK & CLAY RECORD) count as 15 words to cover cost of handling and forwarding replies.

DISPLAY-BOX TYPE ADS

$15.00 per inch. On advance orders for twelve consecutive issues, 12.00 per inch per insertion. (No retroactive adjustment).

An inch is measured vertically on one column, 2¼" wide; three columns on a page. For a two-column advertisement add together height in each column.

Display classified advertisements are set and rates apply in half-inch multiples. (1 inch minimum; 5 inch maximum).

Add 25% to above rates for Reverse Plate (white lettering on black background).

All rates based on payment in advance except on regular contract.

No Agency Commission or Cash Discount

BRICK and CLAY RECORD
5 South Wabash Avenue, Chicago 3

WANTED—HELP

SALESMAN—Large West Coast sewer pipe manufacturer has opening for experienced sewer pipe salesman with college background. All replies confidential. Address 8-HO, care of BRICK & CLAY RECORD.

WANTED — CERAMIC ENGINEER by Sewer Pipe Manufacturer with one plant of substantial capacity. Advise age, experience, salary desired, also references. Address 5-TA, care of BRICK & CLAY RECORD.

WANTED SUPERINTENDENT — to assume charge of a refractories plant and clay mine. Prefer Ceramic Engineer with experience in production or development of refractories, but will consider man without degree if he has worked as foreman or assistant superintendent. A very good opportunity in a growing organization. Address 8-HC, care of BRICK & CLAY RECORD.

CERAMIC ENGINEER — Young man to assist in all phases of manufacture. Experience in glazing desired but not essential. Good future. Write to West Virginia Brick Company, Charleston, W. Va.

CONSULTANT WANTED

Small midwest manufacturer of refractory specialties desires part time services of retired Ceramic Engineer to suggest and direct in the development of high alumina and graphite items.

If your knowledge is going to waste, here is a way to put it to use—on your time schedule.

Address 8-HQ
care of BRICK & CLAY RECORD

WANTED by EASTERN STEEL COMPANY
Ceramic Engineers and Mineral Technologists for plant and research work.
Experience in refractories field desirable but not necessary.
Address 7-GC
care of
BRICK & CLAY RECORD

PLANT SUPERINTENDENT

. . . wanted who is familiar with handling men and the production of Face Brick and Hollow Tile in well established midwest Brick and Tile plant. Please give experience and salary expected.

Address 8-HB
care of BRICK & CLAY RECORD

WANTED
GENERAL SUPERINTENDENT

for Seawater Magnesia and Basic Brick plant operation. Location—Gulf Coast.

Applicant should be 35 to 45 years old and should have technical education with extensive operational experience in Refractories industry. Experience in manufacturing of basic refractories desirable but not essential. Applicant should have knowledge through education or previous experience of inorganic chemical process technology.

Please submit replies to 8-JE, care of BRICK & CLAY RECORD, 5 South Wabash Ave., Chicago 3, Illinois, stating educational background, previous experience, and salary desired.

WANTED — POSITION

GRADUATE CERAMIC ENGINEER — wants position with progressive organization having extensive problems in drying, firing, and instrumentation. Has had broad experience in all phases of Ceramic production and control. Willing to travel part time. Address 8-HF, care of BRICK & CLAY RECORD.

GENERAL MANAGER OR SUPERINTENDENT—Thirty years' experience in production and marketing common brick, face brick and structural tile. Available at once. Address 8-HM, care of BRICK & CLAY RECORD.

SWISS CERAMIC ENGINEER—Age 28. Graduate from West German Ceramic College, 3 years' practical experience in all phases of production in German and Swiss brick factories. Desires adequate job in heavy clay products industry. Address 8-HP, care of BRICK & CLAY RECORD.

POSITION WANTED—as superintendent. Fifteen years' experience in manufacturing and burning of Clay and Shale Face Brick. Married and will relocate. Address 8-HD, care of BRICK & CLAY RECORD.

SUPERINTENDENT OR GENERAL MANAGER—Twenty years' experience in production and marketing Common Brick, Face Brick and Hollow Building Tile in shale and clay. Qualified from pit through the organization. Promptly available. Best of references. Address 8-HN, care of BRICK & CLAY RECORD.

FOR SALE—USED EQUIPMENT

FOR SALE — Used BERG 4 mould Dry Press. Pal-Port Clay Products Co., Palacios, Texas.

FOR SALE — Model BB Boyd Dry Press in excellent condition together with set of press boxes to make complete lines of fire brick shapes, $10,000. Union Mining Co., 2306 1st National Bank Bldg., Pittsburgh 22, Pa.

FOR SALE—40 Pallet Cars for drying, 6' 8½" long by 3' ¼" wide by 4' 8½" high with 24½" guage wheels. Car carries 32 metal pallets 8½" X 2' 10" with clearance height of 13" between pallets. Hanley Company, Summerville, Pa. Phone UL 6-2171

BOILERS

4 — 174 HP Kewanee Boilers, 100 Psi., Series 500, No. 587, 1952 Mfg.—Excellent.

MACHINERY RESERVE OF DENVER
4150 Fox St.
Denver 16, Colorado

Pulleys of various size, face and bores.
Electric Motors, various H.P. and speeds.
Brewer Heavy Duty Conical Roll Crusher.
Steele No. 5 Hoisting Drum for pulling up cars.
Chase Single Deck Dryer Cars, 24" gauge, 39" wide, 6'11" long, 8 channel iron slats.
Kiln Cooling Fans, 48 and 24", Motor Driven Propellers.
Motor Driven Dryer Car Puller, complete with shafting, clutches and cables for 20 tunnels.
200' Clay Storage Shed Conveyor, 20", motor driven.
Rail 16 and 30#.
Towmotor, 4000# cap. with Bickerstaff fork. Practically new.

Address Inquiries to GRANT BRICK WORKS
Weldon, N. C.

FOR SALE:

Austin-Western Badger Shovel, ½-yard, condition, Diesel engine, electric starter, 14" track.

KENTUCKY CLAY MINING COMPANY
Mayfield, Kentucky

MACHINERY BARGAINS

DRY PRESS Boyd Model BB including 10 H.P. Motor and Drive.

COMBINED MACHINE STEEL No. 5, Steele and American De-Airing Combined Machines. International 470.

BRICK CUTTERS Steele and Freese Automatic.

SEWER PIPE PRESSES Pearne Lacy Hydraulic including dies 6 to 15", Tappin Rice including dies 8 to 24".

FERNHOLTZ MACHINERY CO.
8468 B Melrose Place
Los Angeles 46, California

POTTERY PLANT EQUIP 40,000 CAPY DAILY
DRYERS: 4x30, 5x24, 6x30, 7x30, 10x78
Boyd 4 mold, Gates 2 mold DRY PRESSES
BRICK MACHINES, DEAIRING: Steele 40, Intl 846, Bonnot 497, Amer 404A, FRH WJ6, Amer 290.
MILLS: 4½x16, 6x8, 6½x16, 6x15 Ball, 2222, 3033, 4033, 3660, 1319, 1324 Hammer
DRY PANS: 5', 7', 9'
CUTTERS: Steele 218, Chambers 22, Amer 498B
CRUSHERS: Steele 1232, 1822, Brewer conical 1822, 1436, 2416 & 3018 all roll.
1260 HP 1050 KVA Diesel Elec. POWER PLANT
Vibrating, Rotary and Plano SCREENS, all sizes.
CONVEYORS: 18x70, 36x151, 42x160, Belt. Also screw and roller type.
Repres: Bonded Scale and Machine Co.
MID-CONTINENT EQUIPMENT CO. INC.
8321 Gannon St. Louis 24, Mo. WYdown 1-2826

FOR SALE

DRYER CARS—Single deck, 24" guage.
DRY PAN—Clearfield, good as new.
CRUSHER—MECO 18" x 24".
ELEVATOR—825 chain, 18" Salem buckets.
BRICK MACHINE—Chambers ROYAL de-aired.
CUTTER—Steele 18B Left hand, with tile reel.
REPRESS—Bonnot Special.
FEEDERS—MECO 36" Reciprocating.
MIXERS—Simpson & Clearfield.
New & Used rebuilt equipment for brick tile and pottery.

HERMAN A. HALL
Wyomissing, Pa. Franklin 24310

CRUSHERS, JAW—7½ x 13 Champion, 20 x 4 Farrel, 15 x 24 Traylor & 15 x 24 Diamond Primary portabl plant.

CRUSHERS, ROLL—24 x 24 L.B., 30 x 30 Jeffrey single, 18 x 24, 30 x 16 smooth, 18 x 16, 24 x 12, 24 x 18, 30 x 16 Disintegrating.

DRY PANS—7½ American, 9' Bonnot, 9' Stevenson, w/motor drives.

SCREENS—3 x 5 (1) Universal (new), 3 x 5 (1) & 3 x 10 (2) Tyler Hummer, 3 x 10 (2), 42 x 10 (2) Cedar Rapids, 4 x 20 Rotary, 5 x 12 (2) Robins eliptex.

HAMMER MILLS—M20 Quaker City (7½ HP) new, Mikro 2 81 (10 HP), Williams AKB (25 HP), Jeffrey 36 x 42 (125 HP), Feuna, 8XT13 (350 HP synchronous).

PUG MILLS—7' Steele, 9' Freese, 10' Chambers double shaft, 15' Granulators Freese & Chambers.

BRICK MACHINES—Brewer 9B, International 470, Bonnot #30 & Bonnot de-airing 18" Auger (w/new spare parts).

CUTTERS—Automatic Freese C20, C25, Steele 18 (10" belt), Steele 14B w/14" Belt, 2 spare reels.

DRYER CARS—225 single deck 35 x 84, guage 24"

LAWLER COMPANY
Metuchen, N. J. Liberty 9-0245

Brick Machines: 42IA American and GCS Free Dealring
Disintegrating Rolls: Chambers No. 1, No. 2, J. C. Steele No. 4
Smooth Roll Crushers: J. C. Steele 12" and 18"
Brick Cutter: Freese No. C-25 Automatic
Hammer Mills: Jeffrey 20" x 12" B, 36" x 24" B, 42"x36" — Cedar Rapids No. 3033 — Williams No. GA 60
Rotary Kilns: 4' x 60', 6' x 40', 6' x 72', 6' x 7' x 8', 8' x 125', 8' x 9' x 100', 1 - 30" x 14' 7" Chambers Pug Mill
Rotary Dryers: 4'x20', 5'x30', 6'x40', 6'x72', 8'x 125'
Jaw Crushers: 4"x40' A.W., 9"x15½" Dodge Type and 8"x36"
Vibrating Screens: 3'x8', 4'x8' Tyler Hummers
Side Dump Cars: 120 - 1½, 2, 3 and 12 Yards
Gasoline Locomotives: 4, 6, 8 and 14 Tons
Diesel Locomotives: 6, 10, 25, 45, 65 and 80 Tons
Diesel Locomotive Crane: 25 Ton American
Tanks: 7—10,000, 15,000 and 25,000 Gallon
Derrick Stiffiegs—30 Ton - 100' Boom - 39' Mast

R. C. STANHOPE, INC.
60 E. 42nd St., New York 17, N. Y.

Rails—24" Gage Dryer Cars

Single and Double Deck in Stock
All Sections of New as well as Used Rail. Good Serviceable Condition, together with Spikes, Bolts, Turntables, etc.
Also Brick, Tile, Pottery Machinery carried in stock.
Wire, Write, or Phone

M. K. FRANK
New York City, 480 Lexington Ave.
Pittsburgh, Pa., 401 Park Bldg.
Reno, Nev., 105 Lake Street

FOR SALE

ROTARY DRYERS: 4'6" x 40'; 4'8" x 32'; 42" x 25'; 3' x 24'; 3' x 15'; 6' x 60'.
BALL MILLS: Hardinge 4' Dia. v 16" L. Patterson 5' D. x 22' L.
PEBBLE MILLS: Hardinge 10' dia. x 96", 6' x 8', 5' x 6', 4'6" x 12'.
SPRAY DRYER: 19' D. x 20' high St. St.
POWDER MIXERS: Ribbon - 56 to 336 cu. ft.
11—C. I. P. & F Filter Presses, 7" x 7", 24" x 24", 30" x 30", 36" x 36".

PERRY EQUIPMENT CORP.
1432 N. 6th St. Phila. 22, Pa.
POplar 3-3505

FOR SALE

BRICK MACHINES—All types
PUG MILLS—Single & Double Shaft
GRANULATOR—Freese P16, Chambers No. 51
AUTOMATIC CUTTERS—Steele 18, American 408, Freese C-20 & C-25, End Cutter
HAND CUTTERS—Steele 50, Board Delivery

16 CU. FT. PATTERSON-KELLEY TWIN SHELL BLENDER

DRY PRESS 4 MOULD—Boyd "Special"
DRY PANS 7' & 9'
HAMMER MILLS — Jeffrey 20x24, 36x42, 8x15, Miller 17"
SMOOTH ROLLS—Chambers 16x30, 18'x24"
CONICAL ROLLS—Brewer 32", Chambers 32"
DISINTEGRATORS — Chambers 16", 24", Steele 12", 18"
JAW CRUSHERS—15 x 24, 20 x 4, 20 x 36, 30 x 36, 56" x 72"
PULVERIZERS—Williams Comet Dust Mill; Raymond Lab Size
ROTARY DRYERS & KILNS
DRY MIXERS—Lancaster EBG-3, EAG-3, EAG-4, Simpson 1½, 2, 3, Clearfield #610
SCREENS—Hummer 3 x 5 & 4 x 5 Single, 3' x 10' Double, Selecto 3 x 6, Slip Lawns, 42" x 10' Cedar Rapids
REPRESS 2-MOULD—Bonnot "Special" & International Victor
CLAY FEEDERS—Disc 48" & 60", Steele Even, 36" Reciprocating, Apron
DRYER CARS—200 Single Deck
TURNTABLES—72" Transfer Cars
SIDE DUMP CARS—2 yd. 36" gauge, 1 yd. 24"
PEBBLE MILLS—30 x 42", 4 x 5', 6 x 8', Hardinge 7' x 22", 7' x 48", 4½' x 16".
BALL MILLS—Hardinge 6' x 22", 6' x 36", 10' x 48", 5' x 8", 5' x 21' Tube Mill
STEEL PALLETS—10 x 24", 10 x 41", 14 x 30"
SLIP PUMPS—2 & 4 Cylinder
FILTER PRESSES—13, 32, 60, 70 Leaf
SAGGER PRESSES—22 Crossley with Dies
KILNS—Decorating, high Fire Glass, & Lehr

ROBERT L. CLARE
PERTH AMBOY, N. J. Phone Hillcrest 2-0081

WALTER C. STOLL & SONS

New and Used
CLAY WORKING MACHINERY
5028 Alhambra Ave., Los Angeles 32, Calif.
CApitol 2-1141

FOR SALE—PLANT

FOR SALE—Drain Tile Plant—Michigan. Four kiln plant. 16,000 Sq. Ft. under roof. Additional 4,000 Sq. Ft. steel building ready to erect. Buildings new in 1956. Machinery new 1954 thru 1956. 440 V. 3 Ph. Power. Additional drying capacity could double production. Demand within 50 mile radius in excess of production by 200% and better. Owners have other interest. Address 8-HK, care of BRICK & CLAY RECORD.

FIRE CLAY DEPOSIT—for lease. Millions of tons. Easy to mine. Close to railroad and cities. Located in Pennsylvania. Address 8-HL, care of BRICK & CLAY RECORD.

FOR SALE

Brick and Tile Manufacturing Plant in southwestern Ontario for sale due to major shareholder's retirement. Sales coverage throughout Ontario and Michigan. Moderate down payment. For further information and appointments,

Address 8-HA
care of BRICK & CLAY RECORD

MISCELLANEOUS

PACKING HAY — Marsh hay, Canary grass, Straw, Timothy. Carloads, truckloads delivered anywhere. Kopff Hay Co., Beaver Dam, Wis.

WANTED—Boyd Model X dry press, good condition. Kittaning Refractories, Inc., P. O. Box 50, Kittaning, Pa.

KILNS, DRYERS
Complete Plant Design
For
Brick, Tile, Pipe, Refr.
Investigations — Reports
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Specializing in Grinding Plants and General Plant Layout

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Immediate shipments, all weights, with accessories. Also Turnouts & Storage Tanks.
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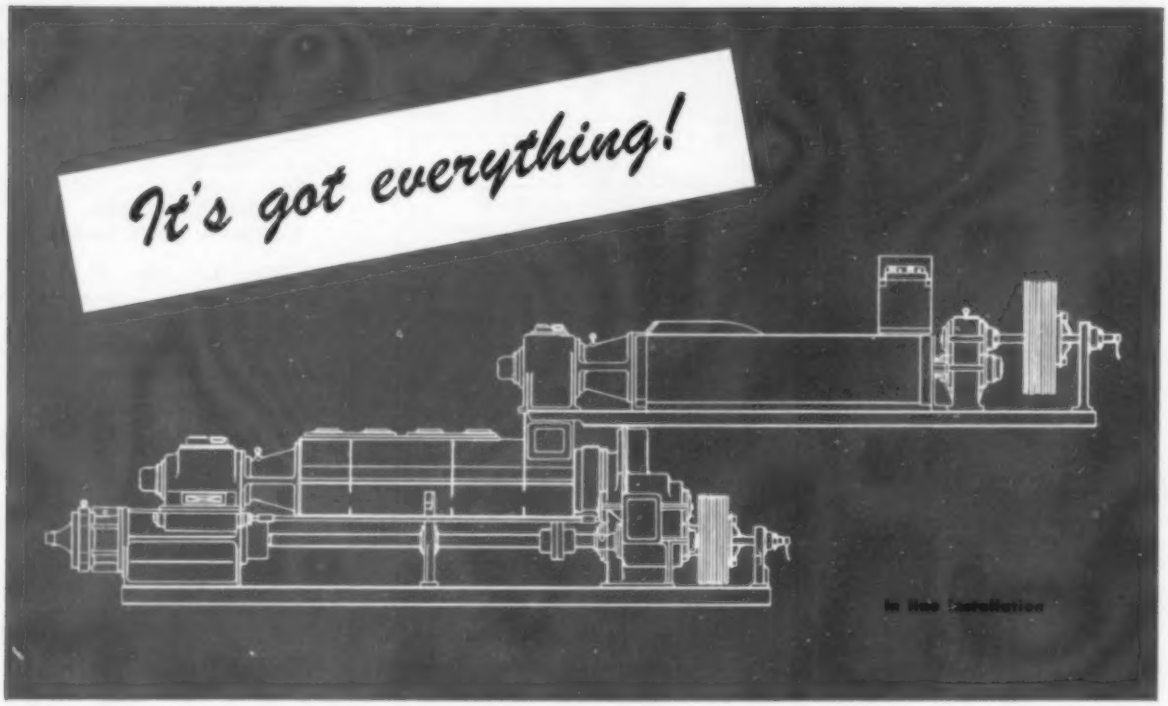


This powerful machine has the compactness of a combined machine plus the economy and versatility of separate drives. It can be made with an open pugmill or, as shown here, with a completely enclosed Vacuum Pugmill. This Vacuum Pugmill is fed by a Steele No. 50F Pug Sealer either in an in line position (as shown in the drawing) or at right angles. This arrangement provides 11'4" of open pugmill plus 10'7" of vacuum pugmill, both 30" ID.

All Steele 60F machines are generously built to provide uninterrupted service. Note the helical primary and spur secondary gears for each drive. Twin vane oil pumps provide force feed lubrication to all gears. These double geared drive shafts also permit the use of less expensive 1200 RPM motors.
Capacity 100,000 to 140,000 brick per 8 hour day.

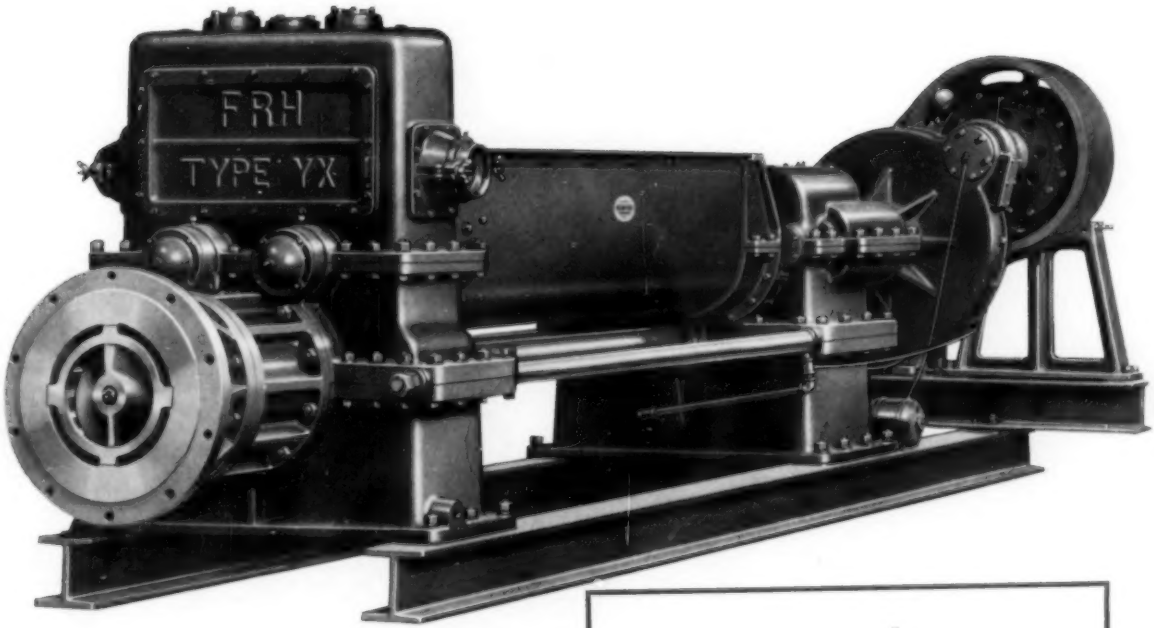
(Right) The Steele No. 60F Vacuum Separate Drive Combined DeAiring Machine

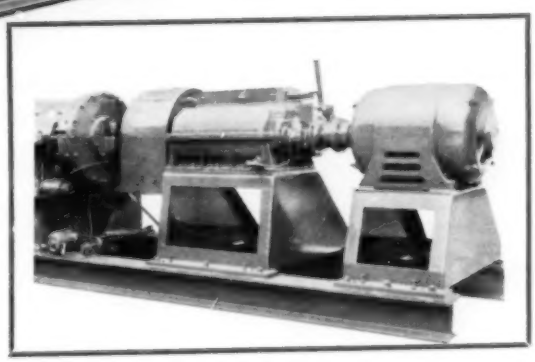
(Lower Right) Massive Gearing

Pacific Agents: Walter C. Stoll, 5028 Alhambra Ave., Los Angeles 32, Calif.

J. C. Steele & SONS, Statesville, N. C.

• THE BEST IN CLAY MACHINERY SINCE 1889 •





CLAY PIPE SPECIALIST *with 4 speeds forward*

Designed especially for the horizontal extrusion of sewer pipe, the F-R-H Type YX De-Airing Machine equipped with a 4-speed transmission (Inset) meets all conditions and extrudes 4″, 6″, of 8″ pipe at maximum output. Proper gear ratio is easily selected for the pipe size in production and the 4-speed YX always gives peak production.

The YX is built for the extra heavy-duty, start-stop conditions of sewer pipe manufacturing and has found wide acceptance with leading sewer pipe producers all over the country. Sewer pipe production with the YX can be fully automated with mechanical handling of the pipe through extrusion, forming, cutoff, trimming, scoring, trade-marking, and placing on the dryer car or pallets.

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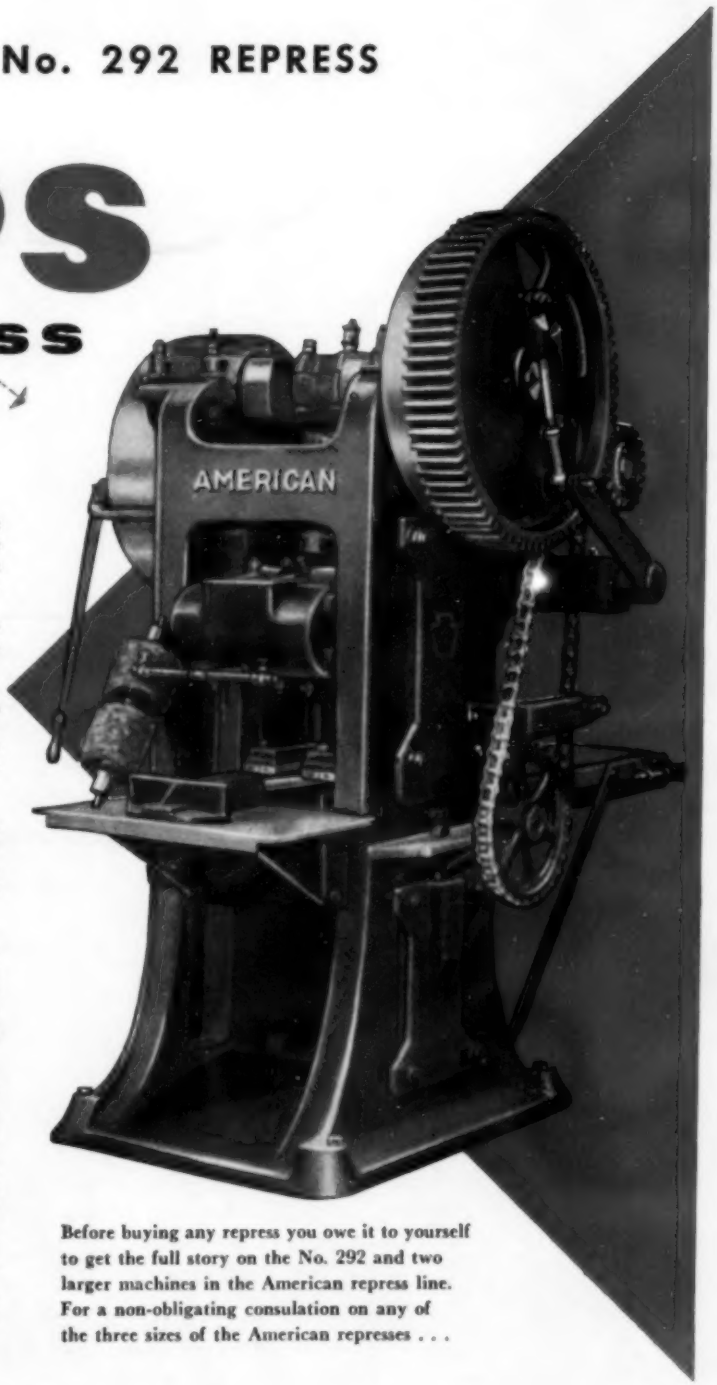
F-R-H

CERAMIC MACHINERY

ALSO BUILDERS OF PLYMOUTH LOCOMOTIVES

THE *American* No. 292 REPRESS

TOPS
in its class



Here's Why

All Outside Adjustments. "V"-shaped side guides for the cross-heads are bolted to the outside of the main frame where they can be easily removed or adjusted to take up wear.

Single Unit Frame. The one-piece frame is extra heavy to withstand the pressure strains of heavy-duty production.

Dirt Resistant Design. All working parts, except the lower cross-head and bottom plungers, are located above the pressing area—not near the floor where they will collect dirt and grit.

Quick Change-Overs. A single connecting rod regulates the thickness of the brick to be pressed. The adjustment can be made in a few minutes and a locking sleeve positively prevents it from slipping.

Versatile Performance. The No. 292 has a capacity of up to 3,000 paving blocks, building bricks or fire brick per hour. A standard mold box handles a brick up to 11 inches by 5 inches by 5½ inches deep, and a single block up to 11 by 13 inches can be pressed.

Special Attachments. The repress can be arranged with motor drive together with a speed reducer and speed regulator. (Optional)

Other Outstanding Features. Bricks are retained under pressure while moving in the mold box, allowing more time for rearrangement of particles forming the structure of the brick. Bottom plungers are provided with a powerful spring to regulate pressure, and each brick is pressed independent of the other. Simplicity of design keeps the number of parts to a minimum.

Before buying any repress you owe it to yourself to get the full story on the No. 292 and two larger machines in the American repress line. For a non-obligating consulation on any of the three sizes of the American represses . . .

WRITE • • • WIRE • • • OR PHONE

American CLAY MACHINERY

A Division of HUBER-WARCO Company
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